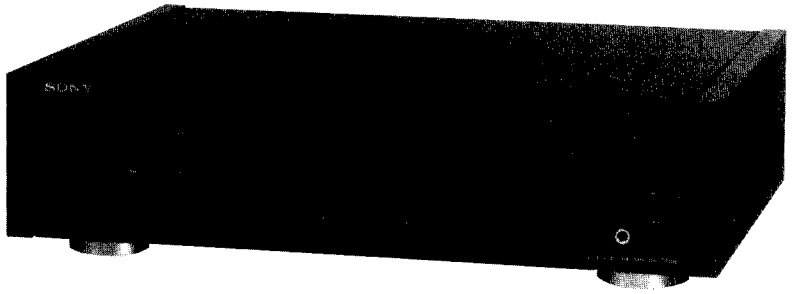
# DTC-55ES/75ES/700

# SERVICE MANUAL

*US Model*
DTC-75ES/700

*Canadian Model*
DTC-75ES

*AEP Model*
*UK Model*
DTC-55ES



| Model Name Using Similar Mechanism | New Mechanism |
|---|---|
| Tape Transport Mechanism Type | DTAM-13 |

## SPECIFICATIONS

| | |
|---|---|
| Tape | Digital audio tape |
| Recording head | Rotary head |
| Recording time | Standard: 120 minutes,<br>Long-play mode: 240 minutes (with DT-120) |
| Tape speed | Standard: 8.15 mm/s,<br>Long-play mode: 4.075 mm/s |
| Drum rotation | Standard: 2,000 rpm,<br>Long-play mode: 1,000 rpm |
| Error correction | Double Read Solomon code |

### Tape

| | |
|---|---|
| Track pitch | 13.6 µm (20.4 µm) |
| Sampling frequency | 48 kHz, 44.1 kHz, 32 kHz |
| Modulation system | 8 – 10 Modulation |
| Transfer rate | 2.46 Mbit/sec. |
| Number of channel | 2 channels, stereo |
| D/A conversion | Standard: 16-bit linear<br>Long-play mode: 12-bit non-linear |
| Frequency response | Standard: 2 – 22,000 Hz (±0.5 dB)<br>Long-play mode: 2 – 14,500 Hz (±0.5 dB) |
| Signal to noise ratio | DTC-55ES/700 :<br>Standard : more than 92dB<br>Long-play mode : more than 92dB<br>DTC-75ES :<br>Standard : more than 93dB<br>Long-play mode : more than 92dB |
| Dynamic range | DTC-55ES/700<br>Standard : more than 92dB<br>Long-play mode : more than 92dB<br>DTC-75ES :<br>Standard : more than 93dB<br>Long-play mode : more than 92dB |
| Total harmonic distortion | DTC-55ES :<br>Standard : less than 0.005% (1kHz)<br>Long-play mode :<br>less than 0.08% (1kHz)<br>DTC-75ES :<br>Standard : less than 0.004% (1kHz)<br>Long-play mode :<br>less than 0.08% (1kHz)<br>DTC-700 :<br>Standard : less than 0.0045% (1kHz)<br>Long-play mode :<br>less than 0.08% (1kHz) |
| Wow and flutter | Below measurable limit<br>(±0.001% W.PEAK) |

### Input

| | Jack type | Impedance | Rated input level |
|---|---|---|---|
| LINE IN | phono jack | 47 kohms | –4 dBs |
| DIGITAL IN | phono jack | 75 ohms | 0.5 Vp-p, 20% |
| DIGITAL IN | optical jack | — | — |

– Continued on next page –

MICROFILM

DIGITAL AUDIO TAPE DECK

SONY®

### Output

| | Jack type | Impedance | Rated output | Load impedance |
|---|---|---|---|---|
| LINE OUT | phono jack | 470 ohms | –4 dBs | More than 10 kohms |
| PHONES | stereo phono jack | 220 ohms | 0.6 mW | 32 ohms |
| DIGITAL OUT | phono jack (DTC-75ES/700) | 75 ohms | 0.5 Vp-p ±20% | — |

DIGITAL OUT (optical jack): wavelength 660 nm

### General

Power requirements — US, Canadian model: 120V AC, 60Hz
AEP model: 220V AC, 50/60Hz
UK model: 240V AC, 50/60Hz

Power consumption — 32 W

Dimensions — DTC-55ES/75ES :
Approx. 470 × 115 × 330 mm (w/h/d) (18⅝ × 4⅜ × 12⅞ inches) incl. projecting parts and controls
DTC-700 :
Approx. 430 × 115 × 330 mm (w/h/d) (17 × 4⅜ × 12⅞ inches) incl. projecting parts and controls

Weight — DTC-55ES/75ES :
Approx. 8.3 kg (18 lb 5 oz)
DTC-700 :
Approx. 7.5 kg (16 lb 8 oz)

### Remote comander (supplied, RM-D55)

Remote control system — Infrared control

Power requirements — 3 V DC, with two size AA (R6) batteries

Dimensions — Approx. 63 × 19 × 175 mm (w/h/d) (2½ × ¾ × 6⅞ inches)

Weight — Approx. 130 g (4 oz) incl. batteries

### Supplied accessories

Sony batteries SUM-3(NS) (2)
Audio connecting cords (2 phono plugs - 2 phono plugs, stereo for line inputs and outputs) (2)
Screws (4) (DTC-55ES/75ES)
Digital audio tape DT-60 (1)

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**SAFETY-RELATED COMPONENT WARNING!!**

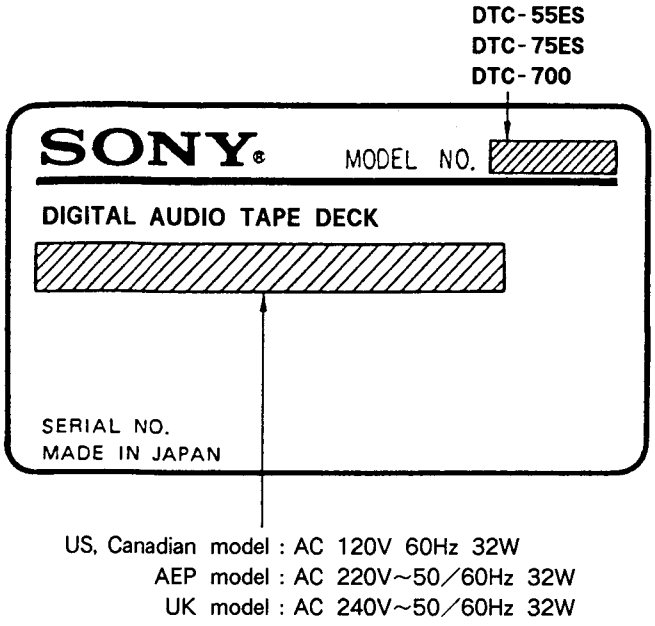
**COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.**

**ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!**

**LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.**

## MODEL IDENTIFICATION

– Specification Label –




# SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety check before releasing the set to the customer:
Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

### LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)

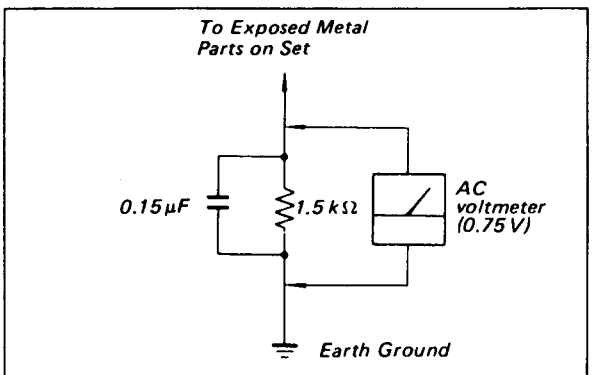
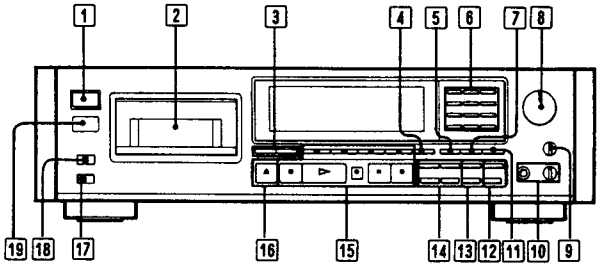
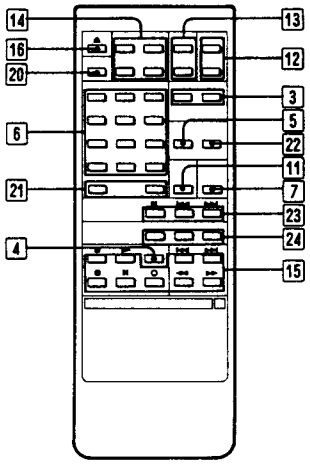



*Fig. A. Using an AC voltmeter to check AC leakage.*

# Location and Function of Controls




## Front Panel/Remote Commander

**1 POWER switch**
Turns the power on and off.

**2 Cassette compartment**
Insert a cassette with the window side up and the safety tab facing you.

**3 COUNTER buttons**
**MODE:** Selects the counter indication in the display window among the linear counter (tape running time), absolute time, elapsed time of the selection, and total remaining time of the tape. Each time you press the button, the indication changes sequentially.
**RESET:** Resets the linear counter to "0M 00S".

**4 FADER button**
Press to fade in or fade out during recording or playback.

**5 REPEAT button**
Press to play a desired portion repeatedly. Each time you press the button, the indication changes as follows:
REPEAT 1 → REPEAT ALL → Nothing

**6 Music select buttons**
**Numeric buttons (0 – 9):** Designate the desired program number to be played back before starting playback.
**CLEAR:** Use to cancel the program number which has been mistakenly entered.
**MUSIC SCAN:** Use this feature to listen to the beginning of each selection successively.

**7 SKIP PLAY button**
Press to activate the skip ID code function. The portion of the tape previously marked will be skipped.

**8 REC LEVEL (recording level) controls**
Adjust the recording level for the analog input signals. The outer knob controls the L (left) channel level and the inner knob the R (right) channel level. The knobs can be adjusted together.
When recording digital signals, it is not necessary to adjust the recording level.

**9 INPUT selector**
Set according to the signal to be recorded.
**ANALOG:** For recording from the equipment connected to the LINE IN jacks.
**OPTICAL:** For recording from the equipment connected to the DIGITAL IN (OPTICAL) jack.
**COAXIAL:** For recording from the equipment connected to the DIGITAL IN (COAXIAL) jack.

**10 PHONES (Headphones) jack and LEVEL controls**
The LEVEL controls adjust the headphones volume level.

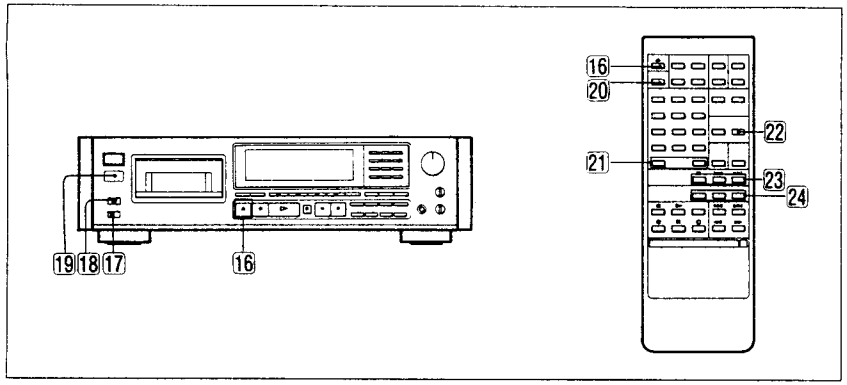
**11 MARGIN RESET button**
Press to reset the margin of peak level.

**12 END ID buttons**
**WRITE:** Press to write the ID signifying the end of playback or recording.
**ERASE:** Press to erase the end ID.

**13 SKIP ID buttons**
**WRITE:** Press at the beginning of the portion you may wish to skip later. A skip ID will be written from the point where you pressed this button.
**ERASE:** Press to erase the nearest skip ID which is before the current position.

**14 START ID buttons**
**AUTO:** Press to turn on and off the AUTO indicator. When the AUTO indicator is lit, the start ID will automatically be written during recording. When the AUTO indicator is not lit, press START ID WRITE at the point where you want to write a start ID.
**WRITE:** Press to write the start ID at the desired point during recording or playback.
**ERASE:** Press to erase a start ID. When a start ID and a program number are written on the tape, both codes are simultaneously erased by pressing this button.
**RENUMBER:** Press to renumber all programs on the tape. When only the start IDs are written, pressing this button will insert the proper program numbers beginning with "1". The tape will rewind and start from the beginning to accomplish this function.

**15 Tape operating buttons**
■ **(stop):** Press to stop recording or playback.
▷ **(play):** Press to play back the tape.
● REC **(recording):** Press to start recording. After pressing this button, press ❚❚ or ▷.
❚❚ PAUSE **(pause):** Press to stop for a moment during recording or playback. To restart recording or playback, press this button again or press ▷.
If the unit is left in the pause mode for about 10 minutes, it will be automatically released and the deck will enter the stop mode. To restart recording or playback from the stop mode, press REC or ▷ respectively.
REC MUTE **(record muting):** Inserts a sound-muted portion (space).
⋈◁, ▷⋈ **(AMS):** Press to locate the beginning of the selection during the playback.
◀◀, ▶▶ **(rewind/review, fast-forward/cue):** In the stop mode, press to rewind/fast-forward the tape. During playback, press to rewind or fast-forward the tape while listening to the sound.




16 ⏏ OPEN/CLOSE **(load/eject):** Press when inserting or removing the cassette.

17 **REC MODE selector:** Normally set to STANDARD. When this selector is set to LONG, you can record analog input signals and digital input signals with 32 kHz in the long-play mode.

18 **TIMER switch**
Normally set to OFF. Use to start recording or playback at the desired time using a commercially available audio timer.

19 **Remote sensor**
Receives the signal from the Remote Commander.

### Remote Commander

20 **DISPLAY MODE button:** Press to turn on and off the indicators in the display.

21 **RMS play buttons**
**ENTER:** To program the selections in a desired order, press this button after pressing the numeric buttons.
**CHECK:** Press to check the programmed contents.

22 **REPEAT A↔B button:** Press to play back a desired portion repeatedly.

23 **CD operation buttons**
Operative only for the Sony CD player equipped with a Remote Commander.
**II (pause):** Sets the CD player in the pause mode during playback. Press again to release pause. If pressed twice when the player is in the stop mode, playback starts.
**⏮ ⏭ (AMS):** Press to locate the desired selection on the Compact Disc during playback or in the stop mode.

24 **CD SYNCHRO (CD synchronized recording) buttons**
**STANDBY:** Press to set the unit in the record-standby mode.
**START:** Press to start recording of the DAT deck and then playback of the CD player.
**STOP:** Press to stop the DAT deck recording and the CD player playback.

## Remote Commander Operation

Each button on the Remote Commander functions in the same way as those having the same name on the front panel. However, the following operations cannot be performed using the Remote Commander. Use the front panel controls instead.

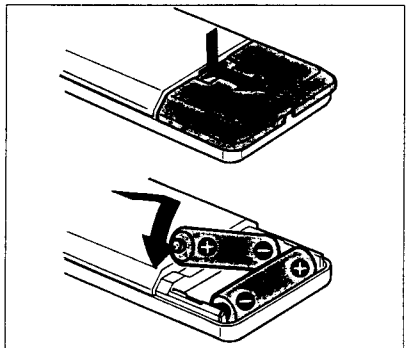
- Turning the power on and off
- Selecting digital (optical/coaxial)/analog input source
- Adjusting the recording level and headphones level
- Setting the timer recording/playback
- Selecting the recording mode (standard or long)

The following operations can be performed only with the Remote Commander.

- Activating CD synchronized recording using a Sony CD player and controlling the CD player
- Locating the desired selection on the Compact Disc or setting the CD player in the pause mode (possible only when a Sony CD player is used.)
- Repeat play (A–B)
- RMS* play

*RMS: Random Music Sensor

## Installing Batteries



Insert two size AA (R6) batteries with correct polarity, and close the lid.

**Notes on remote control**
- Do not expose the remote sensor on the deck to strong light such as direct sunlight, lighting apparatus, etc.
- Do not place any obstructions between the Remote Commander and the remote sensor, or else operations will not be performed correctly.
- The controllable range is limited. Point the Remote Commander directly at the remote sensor on the deck.
- When remote control operation distance becomes shorter, the batteries are weak. Replace both batteries with new ones.

**To avoid battery leakage**
When the commander will not be used for a long period of time, remove the batteries to avoid damage caused by battery leakage and corrosion.

**Battery life**
About half a year of normal operation can be expected when using the Sony SUM-3 (NS) batteries.

## Display Window

### To turn off the display window

When the power is turned on, the display window also is turned on. During recording or playback, the display window can be turned off as follows:

**When operating with the front panel controls**
While pressing COUNTER MODE, press 0.

**When operating with the Remote Commander**
Press DISPLAY MODE.

Each time you press the above buttons, the indicators changes as follows:

Normal indicators ←
↓
Peak level meters and margin indicators go off.
(DISPLAY OFF indicator lights.)
↓
All the indicators go off during recording or playback.*
(DISPLAY OFF AUTO indicator lights momentarily just before the indicators go off.)

* When pressing COUNTER MODE or DISPLAY MODE, except during recording or playback, DISPLAY OFF AUTO lights. In this case, all the indicators go off immediately after recording or playback starts.

### To change the brightness of the display window

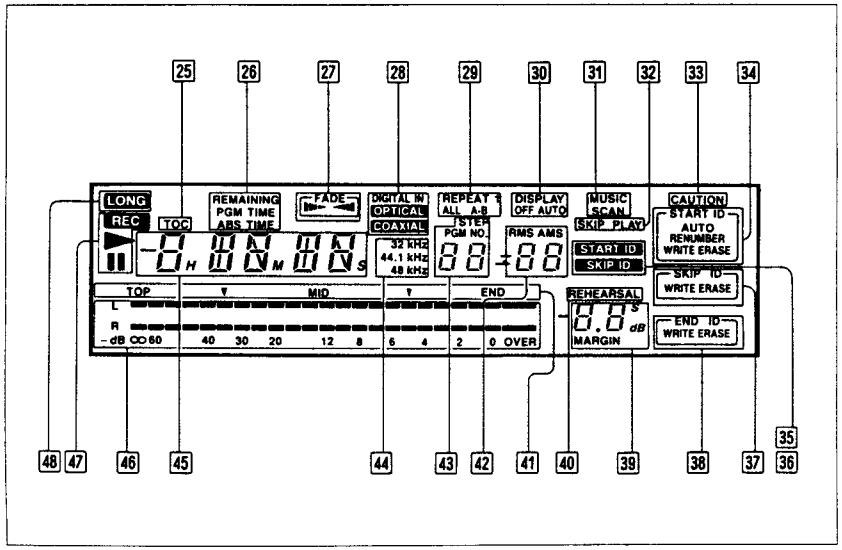
While pressing COUNTER MODE, press one of the numeric buttons 1, 2 and 3. The greater number pressed, the darker the display window becomes.
(When operating with the Remote Commander, also press COUNTER MODE.)

**25 TOC (Table of contents) indicator**
When a pre-recorded DAT cassette is played back, this indicator will light.

**26 REMAINING (remaining time) indicator**
Lights when the counter shows the remaining time of the tape.
**PGM TIME (program time) indicator**
Lights when the counter shows the elapsed time of the current selection.
**ABS TIME (absolute time) indicator**
Lights when the counter shows the tape running time from the beginning.

During normal tape counter mode, the above three indicators all go off.

**27 Fade-in/out indicators**
FADE : Blinks when recording or playback fades in.
FADE : Blinks when recording or playback fades out.




**28 Indicators of the INPUT selector**
The OPTICAL or COAXIAL indicator lights according to the position of the INPUT selector. No indicator lights when the INPUT selector is set to ANALOG.

**29 REPEAT indicators**
**REPEAT 1:** Lights when a desired selection is played back repeatedly.
**REPEAT ALL:** Lights when all the selections are played back repeatedly.
**REPEAT A-B:** Lights when a desired portion is played back repeatedly.

**30 DISPLAY mode indicators**
DISPLAY OFF indicator lights when peak level meters and margin indicators are turned off. DISPLAY OFF AUTO lights momentarily before all the indicators are turned off.

**31 MUSIC SCAN indicator**
Lights after pressing the MUSIC SCAN button to listen to the beginning of each selection successively.

**32 SKIP PLAY indicator**
When this indicator is lit during playback, the portion marked by the skip ID is skipped and playback continues from the next start ID.

**33 CAUTION indicator**
Lights when moisture condensation occurs. If this happens, the deck stops functioning automatically.

**34 START ID mode indicators**
**AUTO:** Lights when the AUTO button is pressed to write the start ID automatically.
**RENUMBER:** Lights when the RENUMBER button is pressed to renumber the program numbers.
**WRITE:** Lights when writing the start ID manually.
**ERASE:** Lights when erasing the start ID.

**35 START ID indicator**
Blinks when writing (for 9 or 18 seconds) or erasing a start ID code, and lights when the start ID is detected during playback.

**36 SKIP ID indicator**
Lights when writing or erasing a skip ID code or when the skip ID is detected during playback.

**37 SKIP ID mode indicators**
**WRITE:** Lights when writing the skip ID.
**ERASE:** Lights when erasing the skip ID.

**38 END ID mode indicators**
**WRITE:** Lights when writing the end ID.
**ERASE:** Lights when erasing the end ID.

**39 MARGIN indicators**
Show how much margin there is between the peak level of input audio signal and 0 dB.

**40 REHEARSAL indicator**
Lights while the rehearsal function is activated.

**41 Frequencies map**
When pressing 4 while keeping COUNTER MODE pressed, bars indicating the sampling frequencies with which the tape was recorded appear on the peak level meters.

**42 AMS (automatic music sensor)**
Shows the number of selections to be skipped ahead or behind in the AMS operation. When designating a selection directly by the numeric buttons and the ▷ button, the display shows the program number of the target selection while the selection is being searched for. When programming the desired selections in the RMS operation, the display shows the program number of the selection to be programmed.

**43 PGM NO./STEP indicators**
Show the program number of the selection being played. When programming the desired selections in the RMS operation, the display shows the step number of the programmed selection.

**44 Sampling frequency indicators**
**48 kHz:** For recording/playback of analog input signals (standard mode)
**44.1 kHz:** For recording/playback of CD and a pre-recorded DAT cassette
**32 kHz:** For recording/playback of analog input signals (long-play mode)

**45 Counter**
Displays the linear counter, absolute time, elapsed time of the selection being played, and the total remaining time of the tape. Each time COUNTER MODE is pressed, the display mode changes in turn.

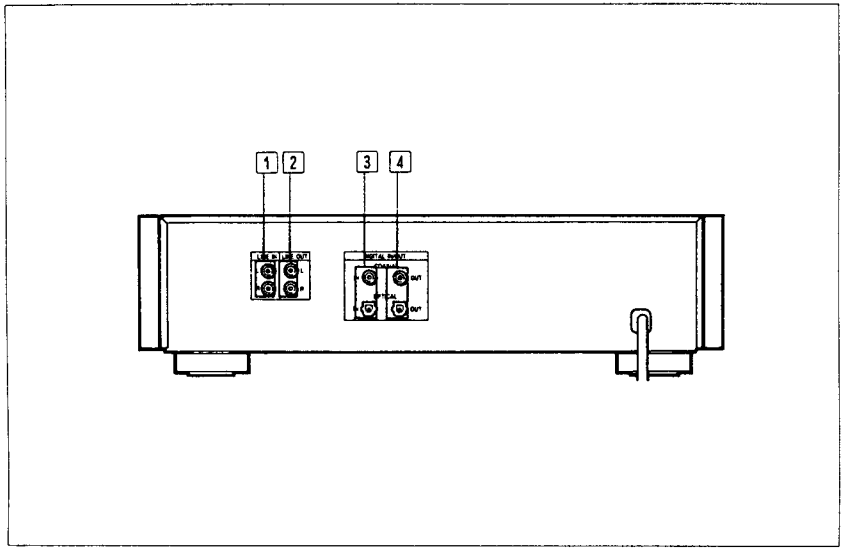
**46 Peak level meters**
Indicate the level of the audio signal being recorded during recording, and the peak values of the audio signal recorded on the tape during playback.

**47 Tape operation indicators**
REC : Lights during recording or in the record-pause mode.
▶ : Lights during recording or playback. It also lights in the record-pause mode or in the play-pause mode.
II : Lights in the record-pause mode or in the play-pause mode.

**48 LONG mode indicator**
Lights when recording or playback is being performed in the long play mode.

# Connections

## Rear Panel Jacks




1 **LINE IN (line input) jacks (phono jack)**
Connect to the recording outputs of a preamplifier/receiver. Signals supplied by the preamplifier/receiver can be recorded using the sampling frequency of 48 kHz or 32 kHz.

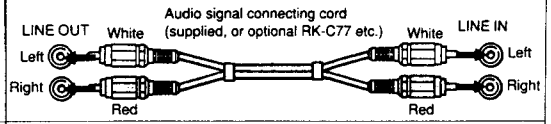
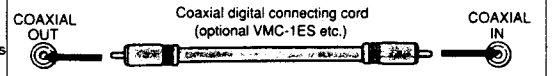
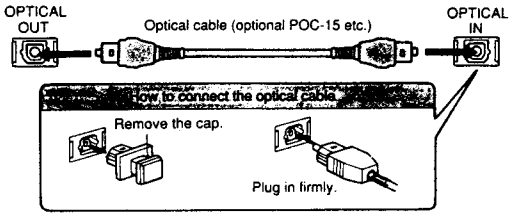
2 **LINE OUT (line output) jacks (phono jack)**
Connect to the DAT or tape inputs of a preamplifier/receiver. The playback signal of this deck will be output.

3 **COAXIAL/OPTICAL DIGITAL IN (digital input) jacks (phono jack/optical jack)**
Connect to the digital outputs of a preamplifier/receiver having a built-in D/A converter or other digital source, such as a CD player for digital-to-digital recording.

4 **COAXIAL(DTC-75ES/700 ONLY)/OPTICAL DIGITAL OUT (digital output) jacks (phono jack/optical jack)**
Connect to the digital inputs of a preamplifier/receiver having a built-in D/A converter or another DAT deck, for playback of a DAT cassette or digital-to-digital recording.

### Connecting Cord

There are the following three types of connecting jacks at the rear of the deck. Each type of jack requires a different type of connecting cord.

| Jack | Required cord |
|---|---|
| LINE IN/OUT (analog input/output) jacks |   |
| COAXIAL IN/OUT (digital input/output) jacks |   |
| OPTICAL IN/OUT (optical transmission digital input/output) jacks |   |

### Before connection

- Use the connecting cords specified in the illustrations.
- Turn off the power for all equipment before making connections.
- Be sure to insert the plugs firmly into the jacks. Loose connections may cause hum and noise. When unplugging, grasp the plug and not the cord.

**Notes on the optical cable**
- Do not bend the cord. When the cord is not used, curl it with a diameter of more than 15 cm (5⅞ inches).
- Do not use it under high temperatures.
- When the optical cable is not connected, cover the OPTICAL IN/OUT jacks with the supplied caps.

**Note on sound signals**
When connecting a digital connecting cord or an optical cable to the DIGITAL IN/DIGITAL OUT jacks, sound signals (L/R) are transmitted together through the cord or the cable.

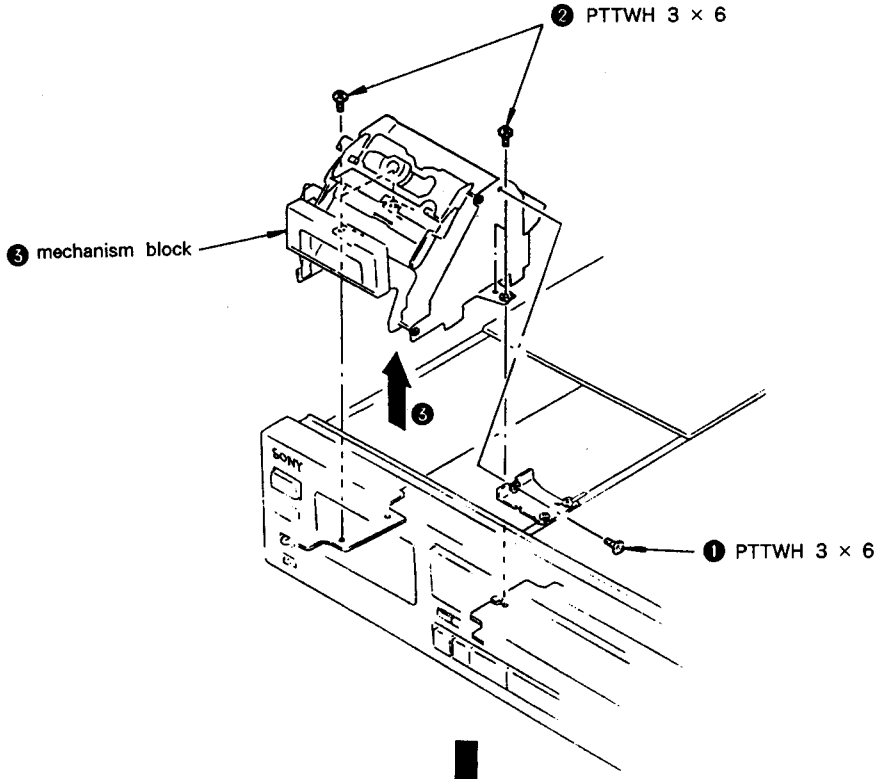
MEMO

# SECTION 2
# DISASSEMBLY

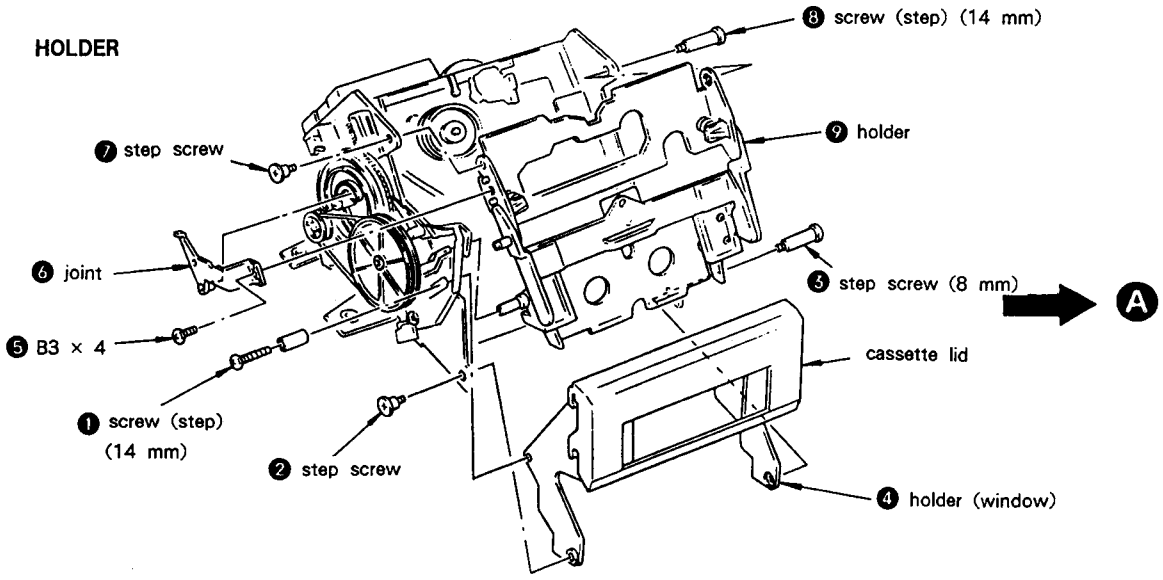
Note : Follow the disassembly procedure numerical order given.

**CASE**
Unscrew the four case attachment screws and remove the case.

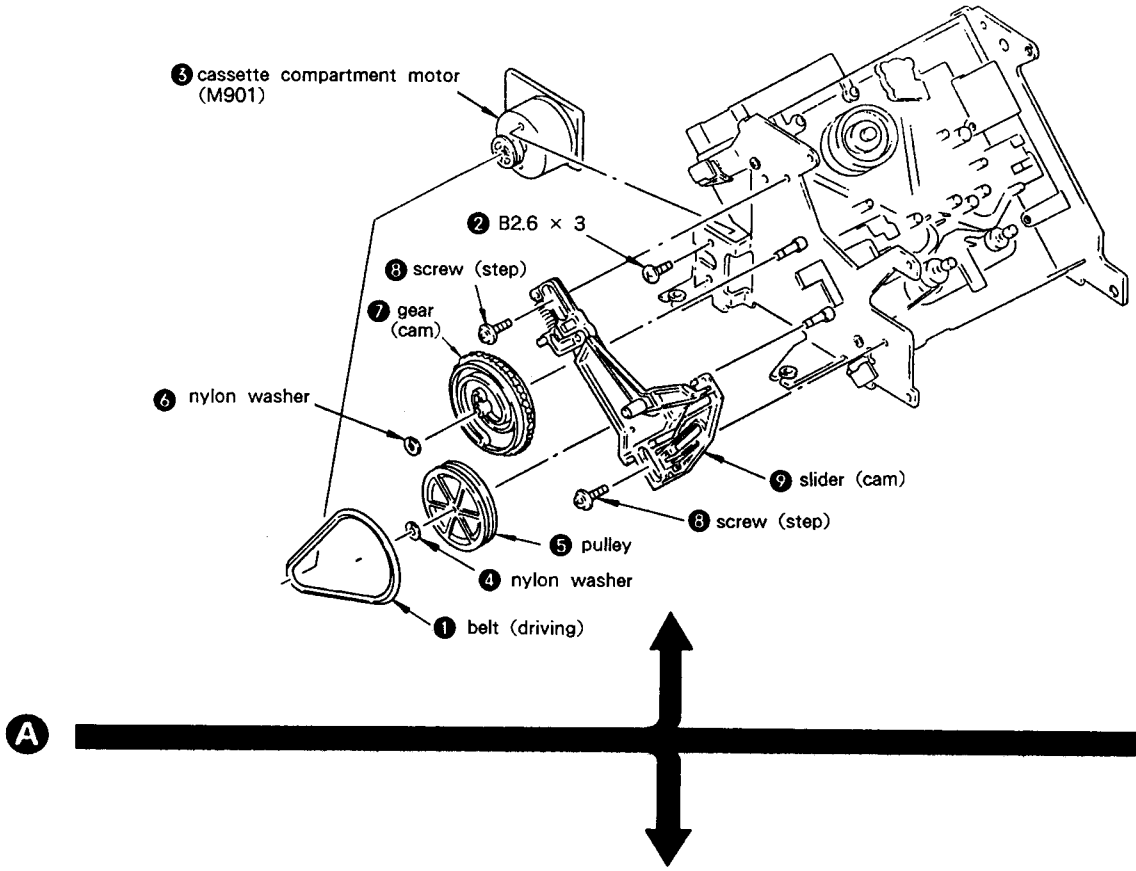
**MECHANISM BLOCK**




**HOLDER**

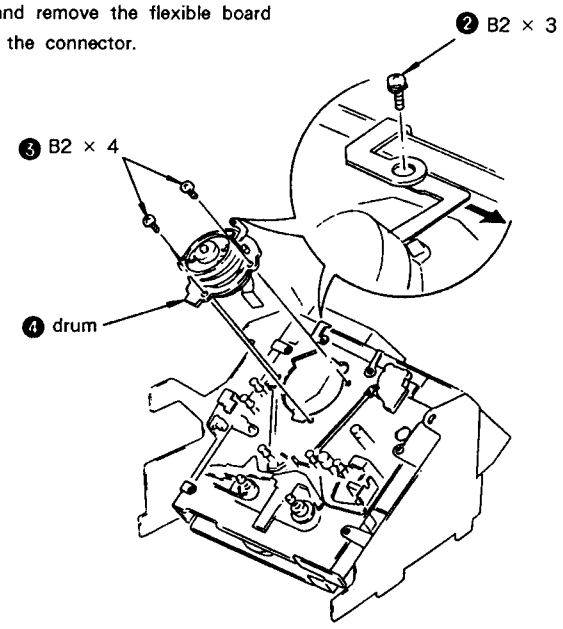


CASSETTE COMPARTMENT MOTOR (M901), PULLEY, GEAR (CAM), SLIDER (CAM)



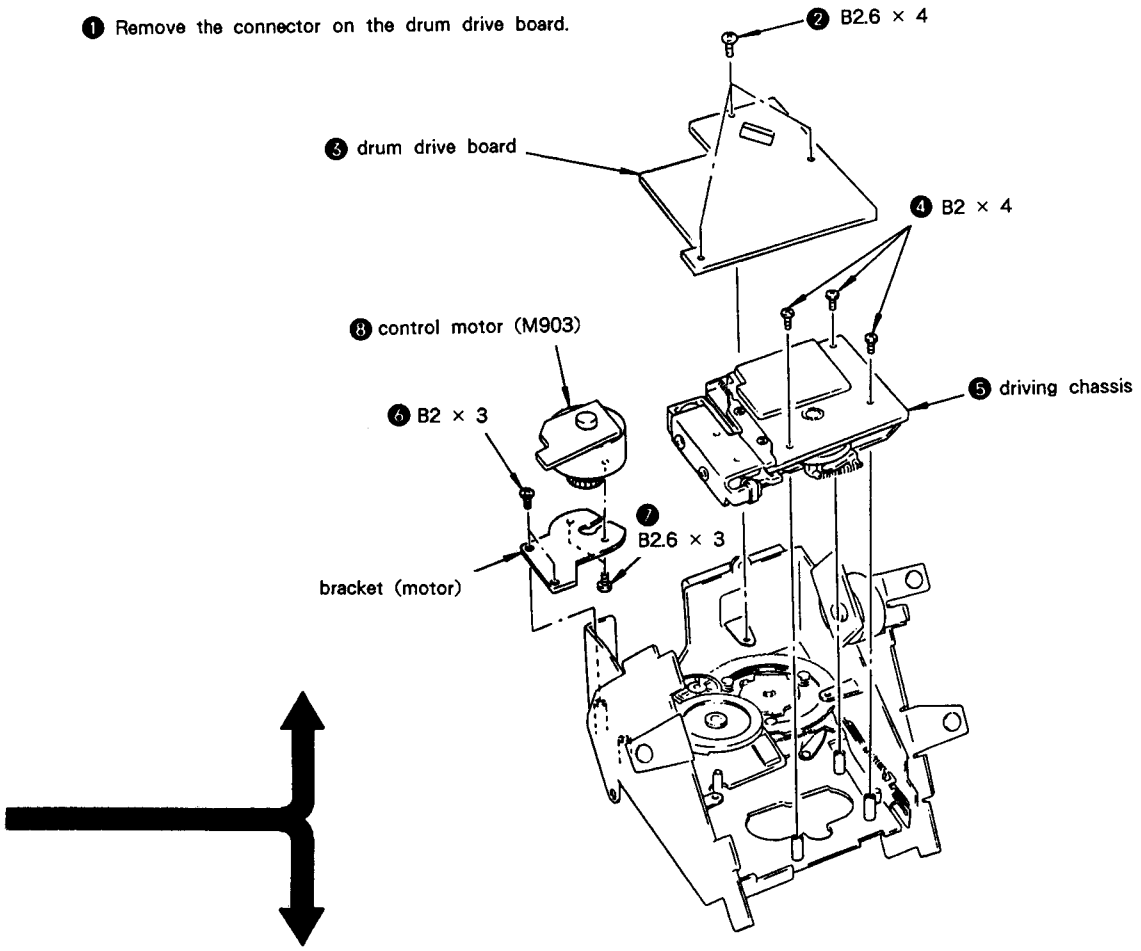

DRUM

❶ Unsolder the drum lead wires and remove the flexible board on rear side of the drum from the connector.

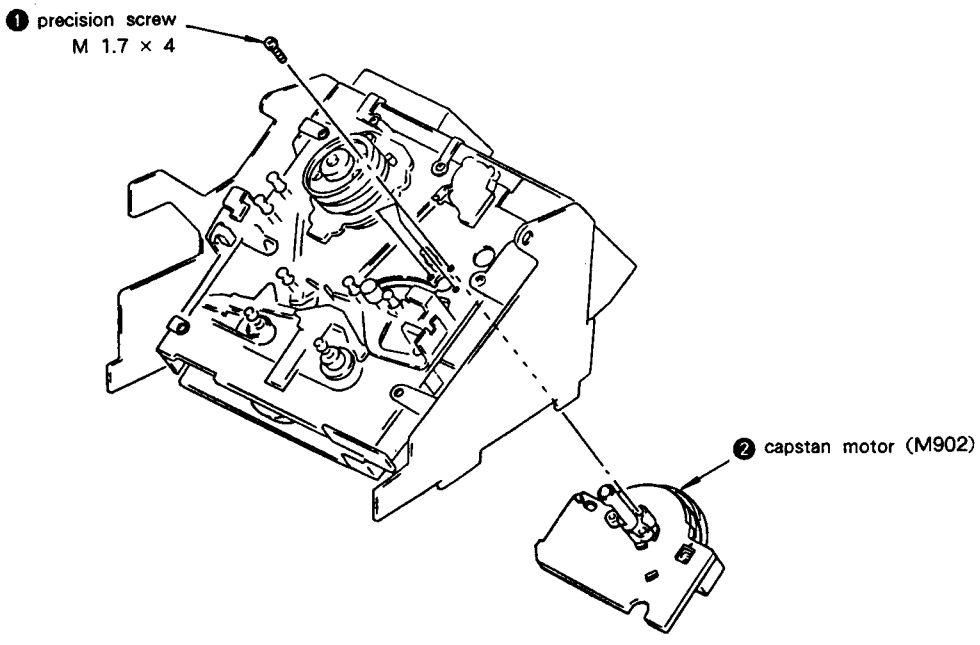


## DRUM DRIVE BOARD, DRIVING CHASSIS, CONTROL MOTOR (M903)

❶ Remove the connector on the drum drive board.




## CAPSTAN MOTOR (M902)



# SECTION 3
# ADJUSTMENTS

**Notes When Making Adjustments**

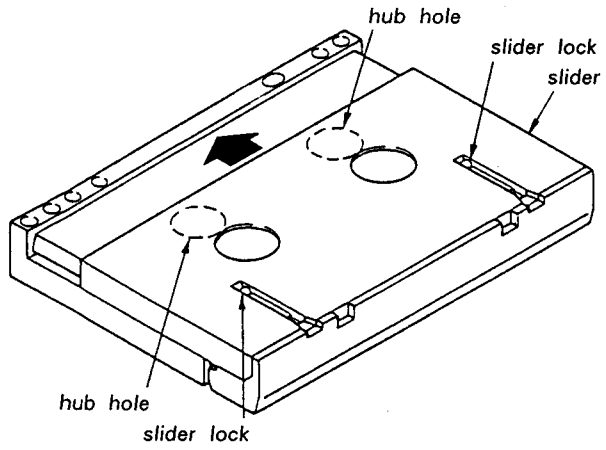
1. Adjustments should be performed in the order listed.

2. Use the following test tapes :
   TY-7111 (8-909-812-00) ····· Level
   TY-7252 (8-909-822-00) ····· Tracking
   TY-7551 (8-909-814-00) ····· Functions
   TY-30B (8-892-358-00) ····· Blank

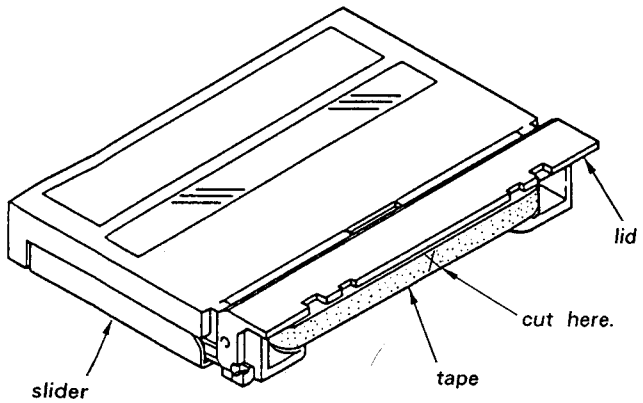
   Use the following torque meter :
   TW-7131 (8-909-708-71) ····· FWD

3. Switches and controls should be set as follows unless otherwise specified.
   TIMER switch : OFF
   REC MODE switch : LONG
   INPUT switch : COAXIAL
   REC LEVEL control : Min.
   PHONES LEVEL control : Min.

4. Creating an end sensor cassette
   (1) Press the tape slider lock and move the slider in the direction indicated by the arrow.




   (2) Open the lid and cut the tape.



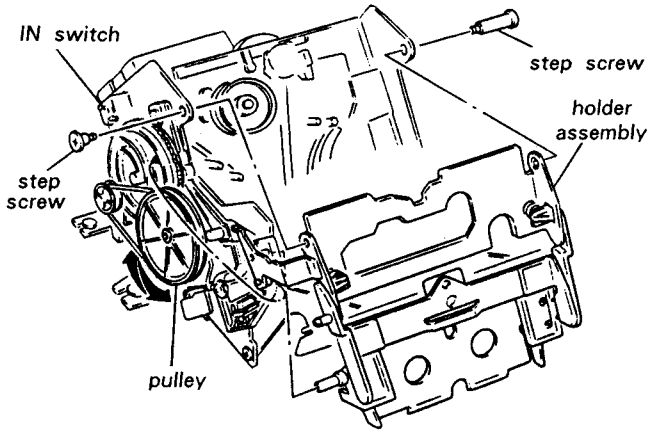

   (3) Turn the hubs until the tape is completely inside the cassette (both T and S sides).
   The end sensor cassette for end sensor adjustment is now ready for use.

5. Be careful not to move RV951 and RV952 on the RF AMP board in the mechanism assembly.

6. To adjust the tape path and guides, remove the holder assembly as shown in the diagram and use the DAT holder jig (J-2000-002-A). This will make it easier to perform adjustments.

- First turning the pulley counterclockwise to put it in loading out status will make removal and reattachment of the holder assembly easier.

- To perform adjustments, turn the pulley clockwise to put it in loading in status, load the cassette tape and set the IN switch to the ON position.

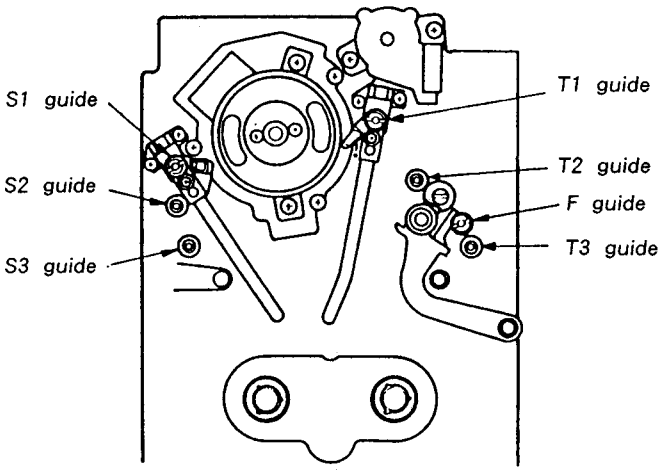



7. Test mode
   To switch to the test mode, connect TP XTEST and GND on the main board and turn power on. In the test mode, when a × 1.5 speed tape (prerecorded tape or test tape) is used and the AMS ⏭ key is pressed, the sampling frequency (FS) indication switches to 30 kHz and the set switches to FWD status. Pressing the AMS ⏮ key causes the set to switch to REV status. With a × 1 tape, pressing the AMS ⏭ key initiates FWD × 16 speed and pressing the AMS ⏮ key initiates REV × 16 speed.
   To cancel the test mode, turn power off and remove the connection between TP XTEST and GND. Be sure to cancel the test mode after adjustments are completed.

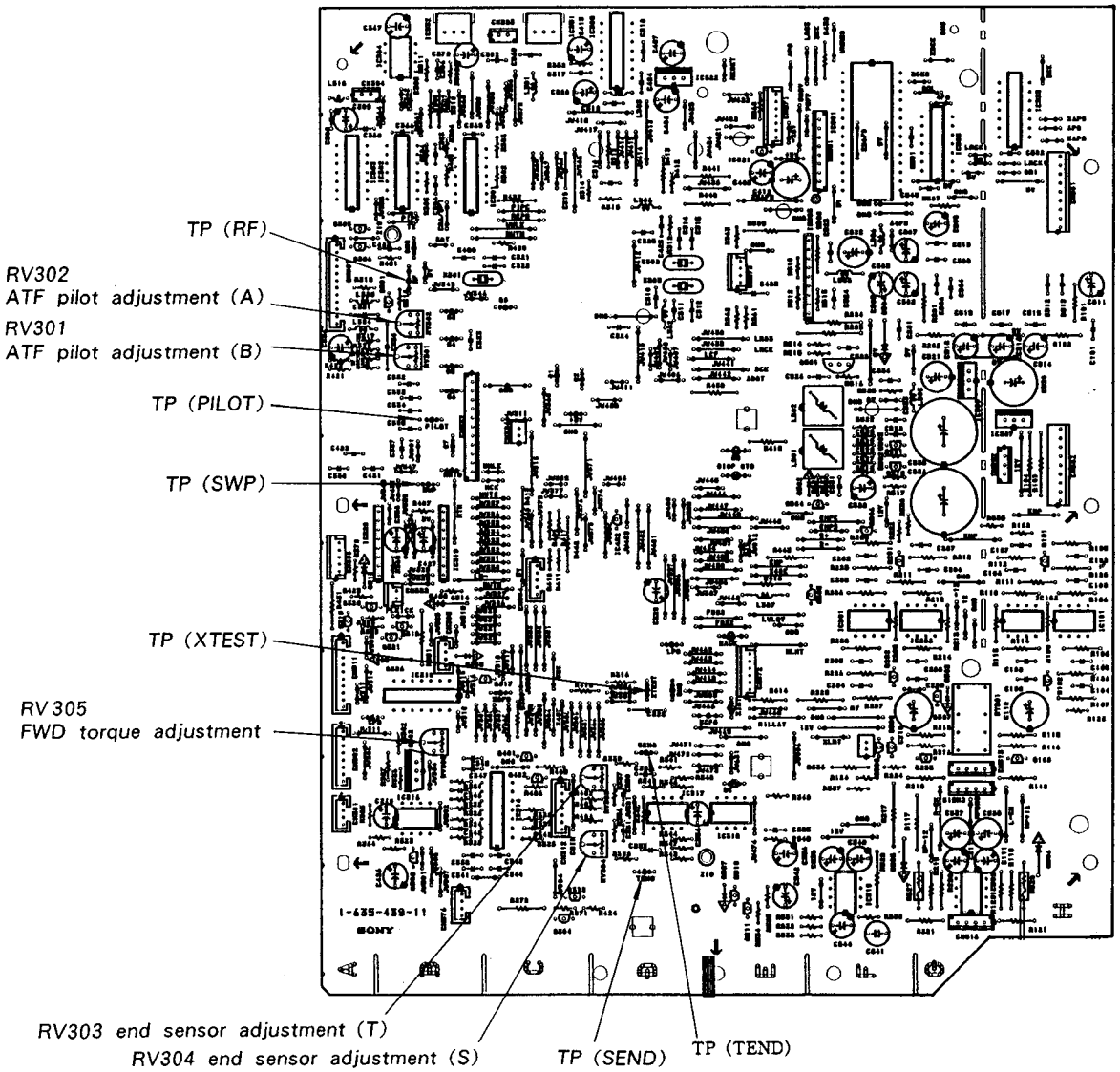
8. After adjustments are completed, check the following items to confirm tape speed accuracy :
   (1) Set the REC MODE switch to STANDARD and confirm that recording and playback operate correctly (× 1 speed).
   (2) Set the REC MODE switch to LONG and confirm that recording and playback operate correctly (× 0.5 speed).
   (3) Confirm that a chirping sound is heard during cue (▶ + ⏭) and review (▶ + ⏮) (× 2.5 speed).
   (4) Confirm that the time display is appropriate after FF (⏭) and REW (⏮) (× 16 speed).
   (5) Confirm that the search (⏭ and ⏮) function operates properly.

**Adjustment Parts Location**

– Mechanism assembly –




– Main board –



## 3-1. MECHANICAL ADJUSTMENTS

After replacing the drum or related parts, adjust the T2 and F guides and then perform the tape path (×1.5 FWD mode) fine adjustment of electrical adjustments.

### T2 Guide/F Guide Adjustment

**Adjustment Procedure :**

1. Put the set into the test mode and load test tape TY-7252 (8-909-822-00).

2. Set the REC MODE switch to STANDARD (ATF : OFF) and press the AMS ⏭ key.

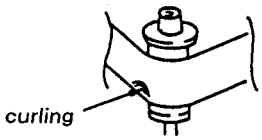
3. Check for curling at the T3 guide. Adjust as described below.

3-1. If there is curling near the top of the T3 guide, adjust the F guide to remove it.

3-2. If there is no curling at the T3 guide no adjustments are necessary.

3-3. If there is curling near the bottom of the T3 guide, adjust the T2 guide to remove it.

* Curling :

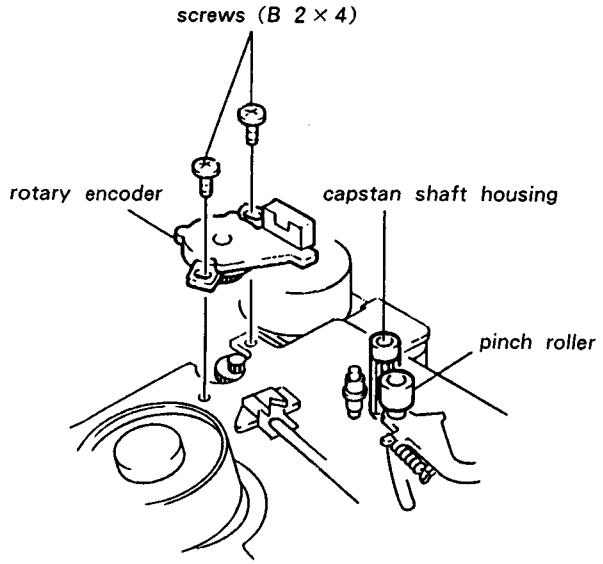



*"Curling" refers to distortion on the tape during FWD operation. It can be identified by directing a light at the tape.*

### Rotary Encoder Adjustment

**Adjustment Procedure :**

1. Remove the rotary encoder.




2. As shown in Figure A, turn the gear at the back of the chassis clockwise. Stop it at the point where the capstan shaft housing and pinch roller make contact at shown in Figure B.

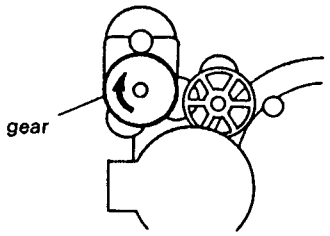



*Figure A. Rear of Chassis*

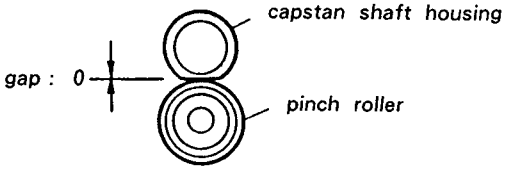



*Figure B. Top View*

3. In this position, align the line on the gear in the rotary encoder with the △ mark and temporarily fasten it in place.

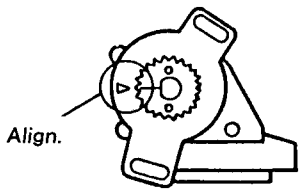



*Figure C. Rear of Rotary Encoder*

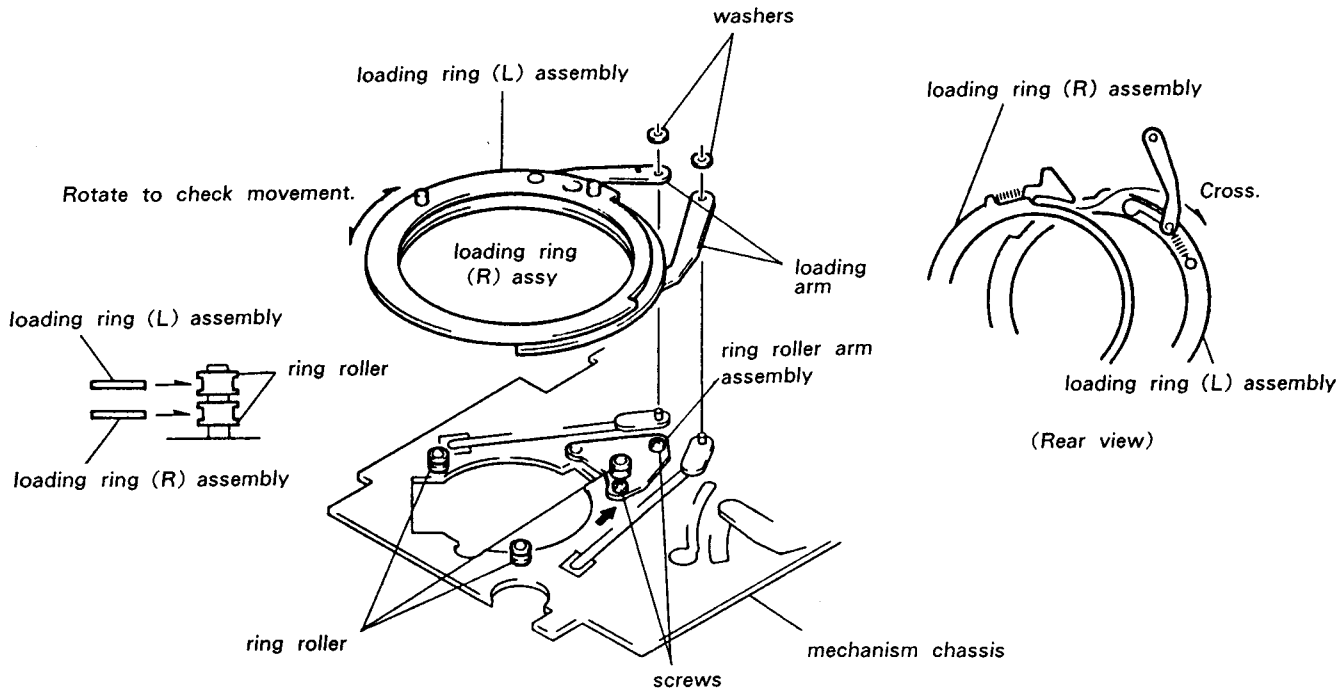
4. Put the set into the test mode.

5. Alternate between PLAY (▶) and STOP (■) a few times. Confirm that during PLAY (▶) the pinch roller makes contact with the capstan shaft and that during STOP (■) status they are as shown in Figure B above. Then tighten the screw securely.

6. If the above conditions are not satisfied, readjust starting from step 1. above.

**Loading Ring Attachment**

1. Join the loading ring (R) and loading ring (L) assemblies by crossing the portion indicated in the diagram.
2. Insert the A ring rollers (2 places).
3. Mount the B ring rollers so that they match up with the loading rings by pressing on the ring roller assembly in the direction indicated by the arrow and tightening the two screws.
4. Slowly turn the loading rings and confirm that they rotate freely and do not rattle.
5. Insert the loading arms (2) into the shafts and secure them with washers.



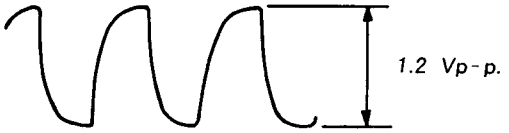
## 3-2. ELECTRICAL ADJUSTMENTS

### End Sensor Adjustment

Perform the following adjustment when the holder has been removed or part of the mechanism deck section replaced.

**Adjustment Procedure :**

1. Connect an oscilloscope to TP (SEND) (supply side) and TP (TEND) (take-up side) on the main board.
2. Load an end sensor cassette and put the set into the STOP (■) mode.
3. Adjust RV304 (supply side) and RV303 (take-up side) on the main board so that the oscilloscope waveform p-p value is 1.2 Vp-p.




**Adjustment Point :** main board

### FWD Torque Adjustment

**Adjustment Procedure :**

1. Put the set into the test mode and load the FWD torque meter TW-7131 (8-909-708-71).
2. Put the set into the PLAY (▶) mode.
3. Adjust RV305 so that the FWD torque value (take-up side rewinding torque) is between 10 - 13 g • cm (0.14 - 0.18 oz • inch).
4. Confirm that the value indicated by the torque meter is maintained for one full cycle.

**Adjustment Point :** main board

### FWD Back Tension Check

**Check Procedure :**

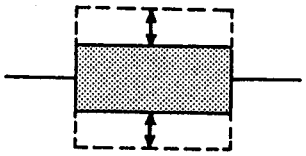
1. Put the set into the test mode and load the FWD torque meter TW-7131 (8-909-708-71).
2. Put the set into the PLAY (▶) mode.
3. Confirm that the back tension (supply side) is between 4.5 - 6.5 g • cm (0.063 - 0.09 oz • inch).
4. Confirm that the value indicated by the torque meter is maintained for 1/2-cycle.

### Tape Path Fine Adjustment (× 1.5 FWD Mode)

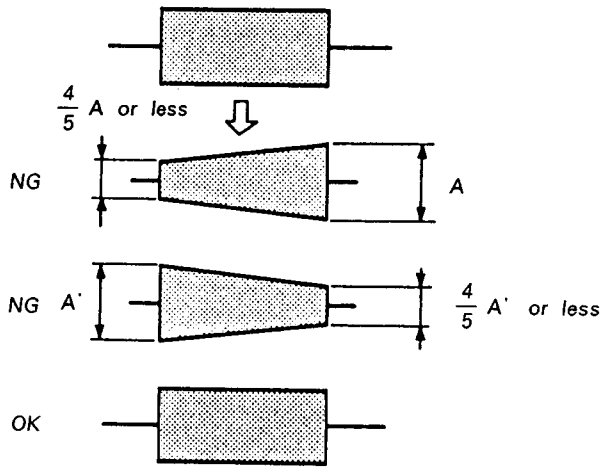
Perform the following adjustment when the drum has been replaced.

**Adjustment Procedure :**

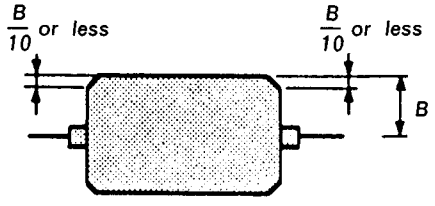
1. Connect an oscilloscope CH-1 to TP (RF) and CH-2 to TP (SWP) on the main board.
2. Put the set into the test mode and load test tape TY-7252 (8-909-822-00).
3. Press the AMS (⏭) key.
4. With the REC MODE switch set to STANDARD (ATF : OFF) and the TIMER switch set to PLAY or REC (OFFSET : + or −), fine adjust the S1 and T1 guides so that the oscilloscope RF signal waveform remains the same when high-low is repeated.



5. Check the RF signal waveform with the REC MODE switch set to LONG (ATF : ON) and the TIMER switch set to PLAY or REC (OFFSET : + or −).




6. Check the RF signal waveform with the REC MODE switch set to LONG (ATF : ON) and the TIMER switch set to OFF (OFFSET : 0).
   (1) Confirm that the RF signal waveform peak value is 60 mV or more.
   (2) Confirm that the undershoot level of the RF signal waveform's flat portion is within 10 %.



7. When the measured values are not within the above tolerances, repeat items 3 - 6 above.

8. In the case of the S2, T2 and F guides, check to make sure that there is no gap between the tape and the bottom flange. Also confirm that there is no curling where the tape makes contact with the bottom flange. When there are any gaps or curling, adjust according to the instructions on page 14.

**Adjustment Point :** mechanism assembly

### DPG Adjustment

Perform the following adjustment without fail when the drum has been replaced.

**Adjustment Procedure :**

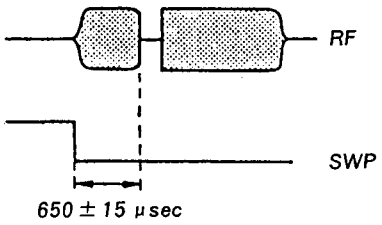
1. Connect oscilloscope CH-1 to TP (RF) and CH-2 to TP (SWP) on the main board.(Use CH-2 as the trigger. When the CH-2 signal is inverted, the trailing edge can be used for synchronization.)

2. Put the set into the test mode and load test tape TY-7252 (8-909-822-00).

3. Set the REC MODE switch to LONG (ATF : ON) and the TIMER switch to OFF (OFFSET : 0).

4. Press the AMS (⏭) key.

5. Press the ◀◀ and ▶▶ keys as appropriate so that the gap between the oscilloscope SWP and RF signals becomes 650 ± 15 μsec.(Hold the ◀◀ and ▶▶ keys down for more than 1 second to perform rough adjustment. Hold them down for approximately 0.2 seconds for fine adjustment.)




### ATF Pilot Adjustment

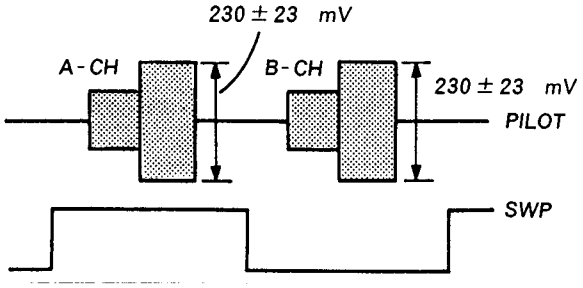
Perform this adjustment after cleaning the heads with a cleaning cassette.

**Adjustment Procedure :**

1. Connect oscilloscope CH-1 to TP (PILOT) and CH-2 to TP (SWP) on the main board.(Use CH-2 as the trigger.)

2. Put the set into the test mode and load test tape TY-7111 (8-909-812-00).

3. Put the set into the PLAY (▶) mode and adjust RV301 (B-CH) and RV302 (A-CH) on the main board so that the oscilloscope PILOT waveform p-p value is 230 ± 23 mV.




**Adjustment Point :** main board

# SECTION 4
# DIAGRAMS

## 4-1. PIN FUNCTIONS

IC306, CXD1136Q

| Pin No. | Pin Name | I/O | Description |
|---|---|---|---|
| 1 | DIGO | O | Serial data output synchronized with BCK (complement of 2) |
| 2 | DIGI | I | Serial data input synchronized with BCK (complement of 2) |
| 3 | ERFO | O | Signal output for discriminating whether or not DADT has interpolated data |
| 4 | UNDF | O | Detect result for ADDT L, R channel data of -54 dB or less ("L": -54 dB or less) |
| 5 | OVFL | O | Detect result for ADDT L channel overflow ("L": overflow detected) |
| 6 | OVFR | O | Detect result for ADDT R channel overflow ("L": overflow detected) |
| 7 | VSS | | GND |
| 8 | SUBT | I | Selects whether subcode or 18-bit data is output to ADDT and DIGO ("H" or open: 18-bit data output, "L": subcode output) |
| 9 | LSB1 | I | MSB/LSB fast switching for DADT, ADDT, DIGI, DIGO ("H" or open: MSB fast, L: LSB fast) |
| 10 | LSB2 | I | MSB/LSB fast switching for DAC2, ADC2L (ADC2R) ("H" or open: MSB fast, L: LSB fast) |
| 11 | OVON | I | Overflow detect result on/off ("H" or open: OVFL, OVFR output valid, L: OVFL, OVFR fixed "H") |
| 12 | LCF | I | Low-cut filter on/off ("H" or open: on) |
| 13 | ADDA | O | "H" in AD mode (DASL = DIAN = "L") |
| 14 | DIAN | I | Sets AD and DA modes |
| 15 | DASL | I | Sets AD and DA modes |
| 16 | MUTE | I | Soft muting on/off ("H": mute on) |
| 17 | ATLV | I | Digital volume range setting ("H" or open: 0--60, -<infinity> dB, "L": +12--48, <infinity> dB |
| 18 | ATON | I | Digital volume on/off ("H" or open: off) |
| 19 | ATDN | I | Digital volume level down |
| 20 | ATUP | I | Digital volume level up |
| 21 | ATCK | I | Digital volume level setting clock and soft muting external clock |
| 22 | ATEX | I | Soft muting operation clock selection ("H" or open: internal clock, "L": ATCK) |
| 23 | VDD | — | Power supply (+5 V) |
| 24 | NC | | |
| 25 | VDD' | — | Oscillator circuit power supply (+5 V) |
| 26 | SCK | O | Oscillator clock output |
| 27 | NC | | |
| 28 | XTLI | I | Crystal connector and clock input pin |
| 29 | NC | | |
| 30 | XTLO | O | Crystal connector pin (24.576 MHz oscillation frequency possible) |
| 31 | VSS | — | Oscillator circuit GND |
| 32 | CKSL | I | Oscillator clock division selection ("H" or open: no division, "L": 1/2 division) |
| 33 | NC | | |
| 34 | NC | | |
| 35 | DOFF | I | DAC2 digital offset on/off ("H" or open: on) |
| 36 | APSL | I | Aperture correction filter coefficient selection (not valid in AD mode) ("H" or open: correction active) |
| 37 | LRSL | I | L, R channel phase difference correction selection ("H" or open: correction active) |
| 38 | DAC2 | O | Serial data output to 2-times oversampling DA converter (complement of 2) |
| 39 | VSS | — | Power supply (+5 V) |
| 40 | BKSL | I | LRCK, BCK input timing switch ("H" or open: LRCK change point and BCK leading edge synchronized, "L": LRCK change point and BCK trailing edge synchronized) |
| 41 | INSL | I | DADT, DIGI, ADC2L (ADC2R) data incorporation clock selection ("H" or open: BCK, "L": INCK) |
| 42 | ADSL | I | ADC2L, ADC2R data selection ("H" or open: ADC2L, "L": ADC2L and ADC2R switched by LRCK2) |
| 43 | NC | | |
| 44 | WCK2 | O | Clock equivalent to 4fs |
| 45 | LR21 | O | DAC2 L, R channel discrimination signal in I²S format |
| 46 | APTL | O | Aperture signal |
| 47 | APTR | O | Aperture signal |
| 48 | LRCK2 | O | DAC2, ADC2L (ADC2R) L, R channel discrimination signal (equivalent to 2fs) ("L": L channel, "H": R channel) |
| 49 | XLRCK2 | O | LRCK2 inverted output |
| 50 | XBCK | O | BCK inverted output |
| 51 | BCK | I | Clock equivalent to 64fs for DADT, ADDT, DIGI, DIGO data incorporation |

| Pin No. | Pin Name | I/O | Description |
|---|---|---|---|
| 52 | INCK | I | DADT, DIGI, ADC2L (ADC2R) data incorporation clock |
| 53 | VDD | | Power supply (+5 V) |
| 54 | ADC2L | I | Serial data input from 2-times oversampling AD converter (complement of 2) |
| 55 | ADC2R | I | Serial data input from 2-times oversampling AD converter (complement of 2) |
| 56 | LRCK | I | DADT, ADDT, DIGI, DIGO L, R channel discrimination signal (fs) ("L": L channel, "H": R channel) |
| 57 | ADDT | O | Serial data output synchronized with BCK (complement of 2) |
| 58 | ERFI | I | Signal input for discriminating whether or not DADT has interpolated data (complement of 2) |
| 59 | DADT | I | Serial data input synchronized with BCK (complement of 2) |
| 60 | OVCW | I | Clock input which determines detect time for OVFL, OVFR and UNDF |

IC307, CXD2601Q

| Pin No. | Pin Name | I/O | Description |
|---|---|---|---|
| 1 | A08 | I/O | RAM address A08 |
| 2 | A09 | I/O | RAM address A09 |
| 3 | VDD | – | 5V |
| 4 | A10 | I/O | RAM address A10 |
| 5 | A11 | I/O | RAM address A11 |
| 6 | A12 | I/O | RAM address A12 |
| 7 | A13 | O | RAM address A13 |
| 8 | A14 | O | RAM address A14 |
| 9 | XWE | O | RAM write enable signal |
| 10 | XOE | O | RAM output enable signal |
| 11 | XEAN | O | External addressing bus interrupt enable signal |
| 12 | TST1 | I | Test pin (normally "L") |
| 13 | XT10 | O | 18.816 MHz crystal oscillator output |
| 14 | XT11 | I | 18.816 MHz crystal oscillator input |
| 15 | VSS | – | GND |
| 16 | XRST | I | Reset pin (normally "H") |
| 17 | CLKO | I/O | 18.816 MHz clock output |
| 18 | XCST | I/O | SYEK (internal system clock) generation CLKO division timing signal |
| 19 | ATSY | I | ATF sync signal input |
| 20 | MCLK | O | 9.408 MHz clock output |
| 21 | DREF | O | Drum servo reference signal |
| 22 | SBPM | O | Discrimination signal determining whether the subcode I/O clock (EXCK) is accepted ("L": accept, "H": ignore) |
| 23 | EXCK | I | Subcode I/O data transfer clock (DUTY50) |
| 24 | SDSI | I | Subcode serial data input |
| 25 | SDSO | O | Subcode serial data output |
| 26 | SBSY | O | Subcode I/O sync signal |
| 27 | COPY | O | Copy data output |
| 28 | EMP | O | Emphasis data output |
| 29 | MUTE | I | Mute pin |
| 30 | MUTM | O | Mute discrimination signal ("H": muted) |
| 31 | UNLK | O | RX PLL lock discrimination signal ("H": locked) |
| 32 | ERMN | O | Detects presence or absence of RF ("H": RF present, "L" during REC) |
| 33 | SYMN | O | C1 check result for RF ("H": OK) |
| 34 | CHER | I | Signal for discriminating whether C2 is 1 or 2 times (C2 → C1 → C2 or C1 → C2) ("H": 1 time, "L": 2 times) |

| Pin No. | Pin Name | I/O | Description |
|---|---|---|---|
| 35 | PLCK | I/O | RF PLL clock output |
| 36 | TST2 | I | Test pin (normally "L") |
| 37 | RFDT | I | RF signal input |
| 38 | XCS | I | Subcode I/O chip select ("L": select) |
| 39 | SWP | O | RF switching pulse ("L": A-CH, "H": B-CH) |
| 40 | VSS | – | GND |
| 41 | PIPC | O | REC data PILOT/PCM discrimination signal ("H": PILOT, during playback: always "L") |
| 42 | REPB | O | Record/playback switching signal ("H": record) |
| 43 | REDT | O | Recording signal output, fixed "L" during playback |
| 44 | TST4 | I | Test pin (normally "L") |
| 45 | TST3 | O | RX APLL PD output (comparator output) |
| 46 | TST5 | I | RX APLL oscillator cell amp input |
| 47 | TST6 | O | RX APLL oscillator cell amp inverted output |
| 48 | PLCO | I | RX APLL external VCO clock input |
| 49 | PLVR | O | RX APLL comparison signal when external comparator is active (Vin) |
| 50 | PLVF | O | RX APLL comparison signal when external comparator is active (Rin) |
| 51 | MSSL | I | Master/slave setting ("H": master, "L": slave) |
| 52 | RX | I | Digital input |
| 53 | VDD | – | 5V |
| 54 | TX | O | Digital output |
| 55 | AUDR | I | Audio mode/data recorder mode setting ("H": audio mode, "L": data recorder mode) |
| 56 | EXSY | I/O | Complete copy sync signal (25/3 - 100/3 Hz) |
| 57 | EXSN | I/O | Complete copy sync signal (25/3 - 100/3 Hz) |
| 58 | F128 | I/O | 128fsCK (normal)/256fsCK (×2) (DUTY50) |
| 59 | F256 | O | 256fsCK (normal)/512fsCK (×2) (DUTY50) |
| 60 | F512 | O | 512fsCK (normal)/512fsCK (×2) (DUTY50) |
| 61 | ADLF | O | Signal for discriminating whether ADDT serial data is MSB fast or LSB fast ("H": LSB fast) |
| 62 | DALF | O | Signal for discriminating whether DADT serial data is MSB fast or LSB fast ("H": LSB fast) |
| 63 | XT20 | O | 22.5792 MHz crystal oscillator output |
| 64 | XT2I | I | 22.5792 MHz crystal oscillator input |

| Pin No. | Pin Name | I/O | Description |
|---|---|---|---|
| 65 | VSS | – | GND |
| 66 | XT30 | O | 49.152 MHz crystal oscillator output (24.576 MHz in B mode) |
| 67 | XT3I | I | 49.152 MHz crystal oscillator input (24.576 MHz in B mode) |
| 68 | FSEN | I | F128, BCK, LRCK input/output switch ("H": output) |
| 69 | LR03 | O | LR02 inversion |
| 70 | LR02 | O | LRCK 16BCK delay signal |
| 71 | LR01 | O | LRCK 15BCK delay signal |
| 72 | LRCK | I/O | fs (normal)/2fs (×2) ("L": L-CH, "H": R-CH) |
| 73 | WCK | I/O | 2fs (normal)/4fs (×2) (input mode only for testing) |
| 74 | XBCK | O | BCK inversion |
| 75 | BCK | I/O | 64fs (normal)/128fs (×2) |
| 76 | ADDT | I | Serial AD data (complement of 2) |
| 77 | DADT | O | Serial DA data (complement of 2) |
| 78 | DADO | I | Digital output (DA) data (normally connected to DADT) |
| 79 | ADDI | O | Digital input (AD) data output (normally connected to ADDN) |
| 80 | ADDN | I | Digital input (DA) data input |
| 81 | ERRI | I | Digital output V-FLA data input (normally connected to ERRF) |
| 82 | ERRF | O | Signal output for discriminating whether or not DADT has interpolated data ("H": interpolated data) |
| 83 | MNTG | O | Error correction status monitor trigger |
| 84 | D7 | I/O | RAM data bus D7 |
| 85 | D6 | I/O | RAM data bus D6 |
| 86 | D5 | I/O | RAM data bus D5 |
| 87 | D4 | I/O | RAM data bus D4 |
| 88 | D3 | I/O | RAM data bus D3 |
| 89 | D2 | I/O | RAM data bus D2 |
| 90 | VSS | – | GND |
| 91 | D1 | I/O | RAM data bus D1 |
| 92 | D0 | I/O | RAM data bus D0 |
| 93 | A00 | I/O | RAM address A00 |
| 94 | A01 | I/O | RAM address A01 |
| 95 | A02 | I/O | RAM address A02 |
| 96 | A03 | I/O | RAM address A03 |
| 97 | A04 | I/O | RAM address A04 |
| 98 | A05 | I/O | RAM address A05 |
| 99 | A06 | I/O | RAM address A06 |
| 100 | A07 | I/O | RAM address A07 |

IC311, CXA1046M

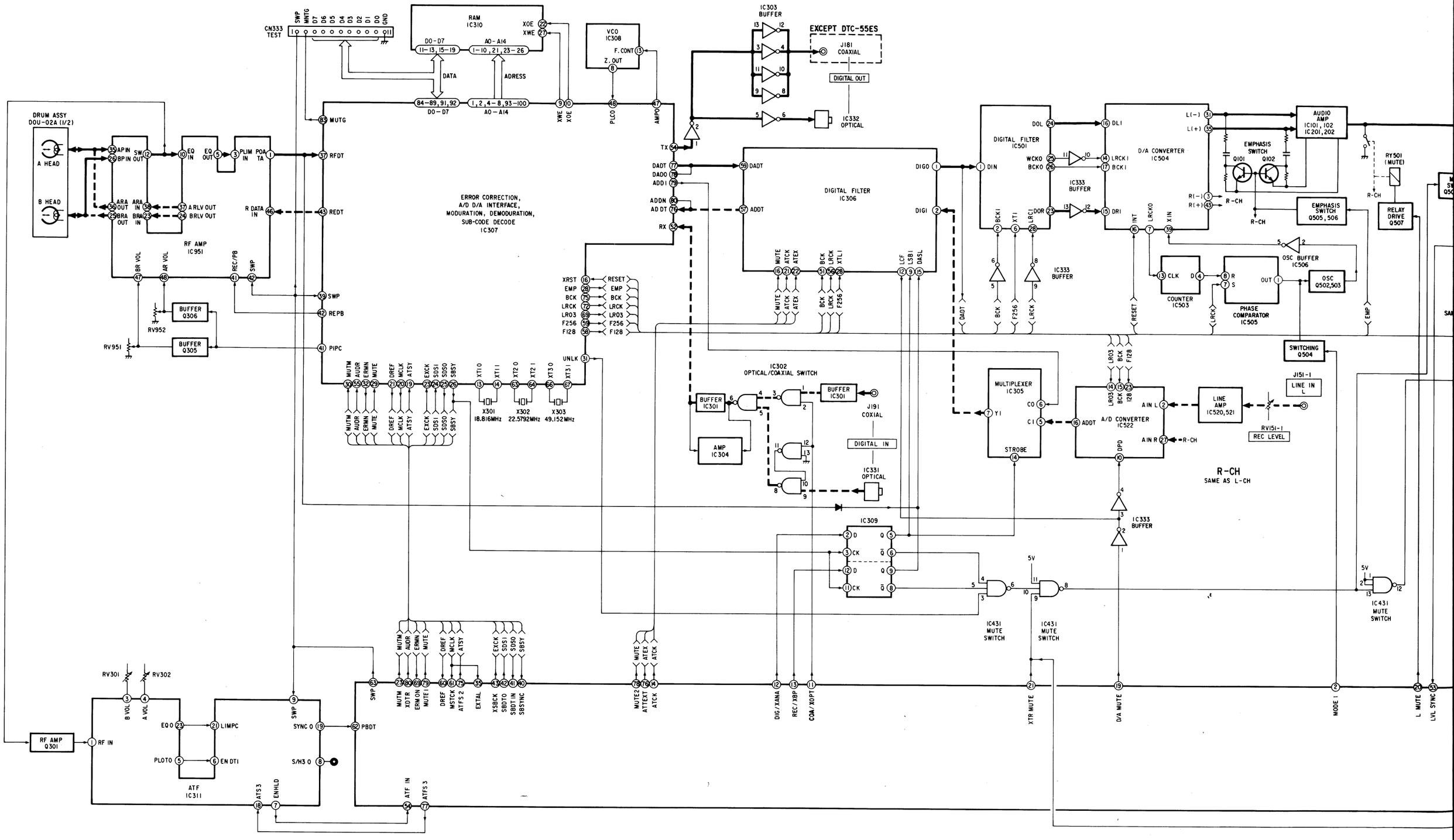
| Pin No. | Pin Name | I/O | Description |
|---|---|---|---|
| 1 | RF IN | I | RF signal input |
| 2 | F CTL | I | External resistor connector pin for determining pilot filter (LPF) characteristics |
| 3 | B VOL | I | Gain control amp B-CH gain adjustment resistor and bypass capacitor connector pin |
| 4 | A VOL | I | Gain control amp A-CH gain adjustment resistor and bypass capacitor connector pin |
| 5 | PILOT OUT | O | Pilot signal output |
| 6 | ENV DET IN | I | Envelope detect signal |
| 7 | ENV HOLD | I | Envelope detect hold capacitor connector pin |
| 8 | S/H 3 OUT | O | Sample-hold 3 output pin |
| 9 | SWP | I | Processing signal A-CH, B-CH switching control pin ("H": B-CH, "L": A-CH) |
| 10 | ATF ON/OFF | I | ATF block (portions other than RF detect) on/off ("L": on) |
| 11 | NORM PLAY | I | Determines whether the mode is normal or not ("L": normal mode) |
| 12 | ATS1 | I | Sample-hold 1 sample pulse input pin |
| 13 | TE | O | Tracking error output pin |
| 14 | VCC | — | Power supply pin |
| 15 | HOLD3C | I | Sample-hold 3 hold capacitor connector pin |
| 16 | HOLD2C | I | Sample-hold 2 hold capacitor connector pin |
| 17 | ATS2 | I | Sample-hold 2 sample pulse input pin |
| 18 | ATS3 | I | Sample-hold 3 sample pulse input pin |
| 19 | SYNC OUT | O | ATF sync output |
| 20 | GND | — | GND |
| 21 | LIM PC | I | Limitter block bypass capacitor connector pin (-) input (can be exchanged with pin 22) |
| 22 | LIM IN | I | Limitter block bypass capacitor connector pin (+) input (can be exchanged with pin 21) |
| 23 | EQ OUT | O | ATF sync equalizer output pin |
| 24 | PCTL | I | Resistor connector pin for determining sync equalizer phase characteristics |
| 25 | LCTL | I | Resistor connector pin for determining sync equalizer low frequency characteristics |
| 26 | DET C1 | I | Smoothing capacitor connector pin for determining RF detector threshold level |
| 27 | DET C2 | I | RF envelope wave waveform adjustment capacitor connector pin |
| 28 | RF DET OUT | O | RF detector output pin |

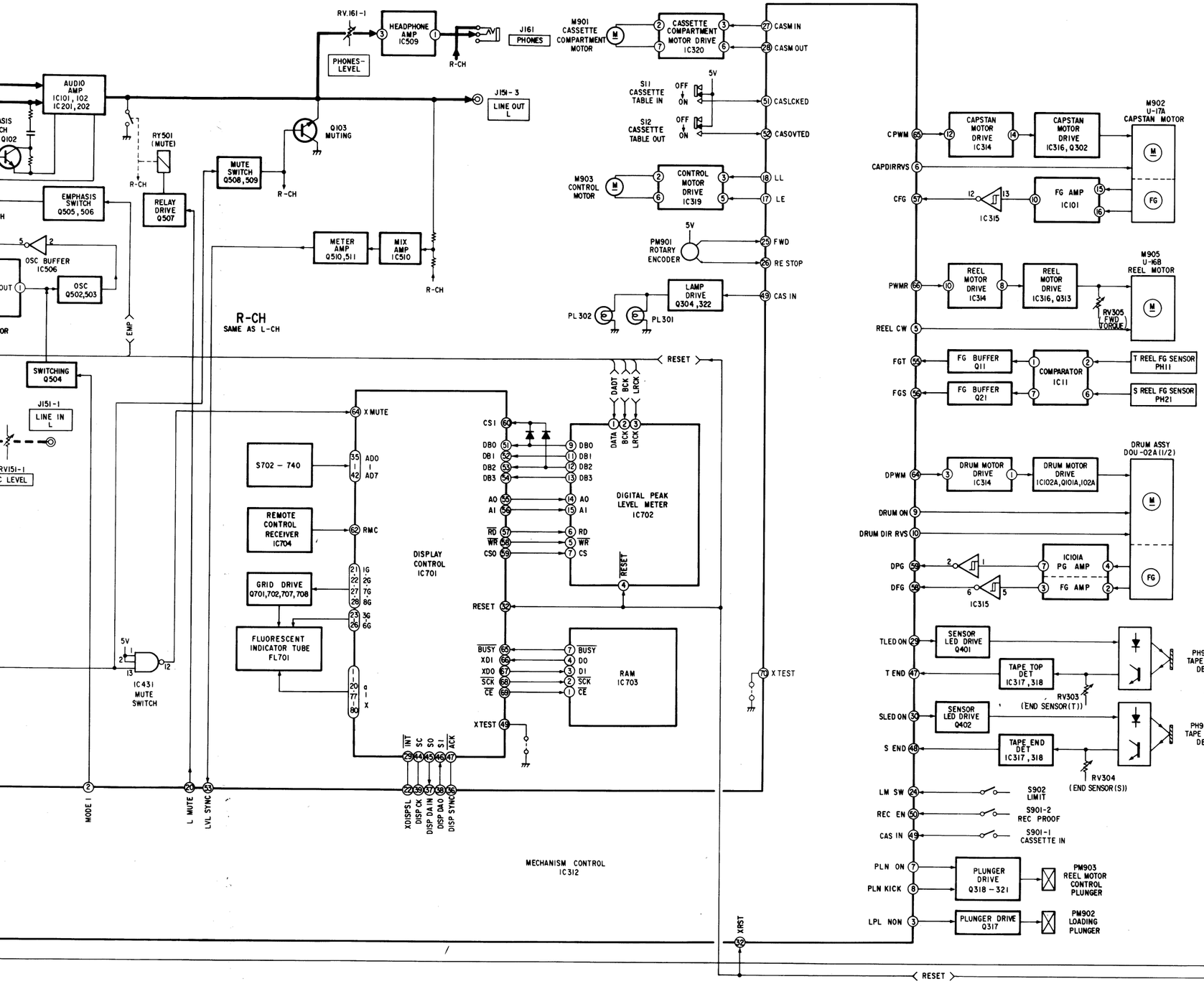
| Pin No. | Pin Name | I/O | Description |
|---|---|---|---|
| 1 | NC | | |
| 2 | NC | | |
| 3 | L PLN ON | O | Loading plunger on |
| 4 | REEL CCW | O | Reel motor counterclockwise (loading plunger kick) |
| 5 | REEL CW | O | Reel motor clockwise (loading plunger kick) |
| 6 | CAP DIR RVS | O | Capstan direction ("L": normal, "H": reverse, brake) |
| 7 | PLN ON | O | Plunger on |
| 8 | PLN KICK | O | Plunger kick |
| 9 | DRUM ON | O | Drum on |
| 10 | DRUM DIR RVS | O | Drum direction ("L": normal, "H": reverse, brake) |
| 11 | COA/XOPT | O | Coaxial ("H")/optical ("L") switch |
| 12 | DIG/XANA | O | Fade in/out digital ("H")/analog ("L") switch |
| 13 | REC/XPB | O | Fade in/out record ("H")/playback ("L") switch |
| 14 | ATCK | O | Fade in/out clock |
| 15 | NC | | |
| 16 | NC | | |
| 17 | LB | O | Loading motor eject |
| 18 | LL | O | Loading motor load |
| 19 | D/A MUTE | O | D/A converter muting |
| 20 | L MUTE | O | Line muting |
| 21 | TR MUTE | O | Transistor muting |
| 22 | X DISP SL | O | Display controller select ("L": active) |
| 23 | NC | | |
| 24 | LIM SW | I | Limit switch (eject position detect) |
| 25 | RE FWD | I | Rotary encoder FWD |
| 26 | RE STOP | I | Rotary encoder STOP |
| 27 | CAS M IN | O | Cassette compartment motor IN |
| 28 | CAS M OUT | O | Cassette compartment motor OUT |
| 29 | T LED ON | O | End sensor T ON (DUTY 50) |
| 30 | S LED ON | O | End sensor S ON (DUTY 50) |
| 31 | MP | I | Microprocessor mode ("L" for this model) |
| 32 | X RST | I | System reset (active low) |
| 33 | $V_{SS}$ | — | GND |
| 34 | XTAL | O | System clock output |
| 35 | EXTAL | I | System clock input |
| 36 | DISP SYNC | I | |
| 37 | DISP DT I | I | Serial data input from display controller |

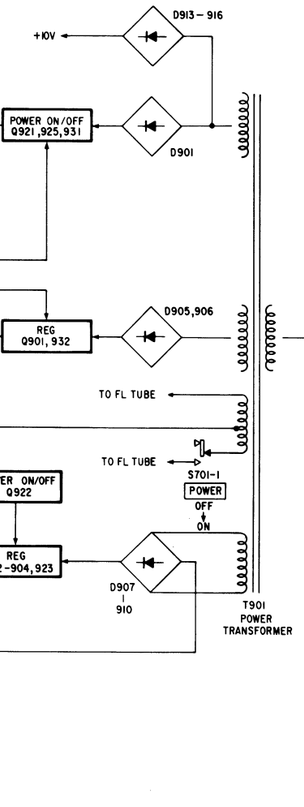
| Pin No. | Pin Name | I/O | Description |
|---|---|---|---|
| 38 | DISP DT O | O | Serial data output to display controller |
| 39 | DISP CK | I | Serial data clock from display controller |
| 40 | SB SYNC | I | |
| 41 | SB DT I | I | Subcode signal input |
| 42 | SB DT O | O | Subcode signal output |
| 43 | X SB CK | O | Subcode interface serial clock |
| 44 | $AV_{SS}$ | – | A/D GND |
| 45 | $AV_{REF}$ | – | A/D reference voltage |
| 46 | $AV_{DD}$ | – | A/D power supply |
| 47 | T END | I | Take-up side end sensor input |
| 48 | S END | I | Supply side end sensor input |
| 49 | CAS IN | I | Cassette in detect |
| 50 | REC EN | I | Erasure prevention slider detect |
| 51 | CAS LCKed | I | Cassette compartment lock detect |
| 52 | CAS OUTed | I | Cassette compartment out detect |
| 53 | LVL SYNC | I | Level sync input |
| 54 | ATF IN | I | ATF pilot input |
| 55 | FG T | I | Take-up side reel FG signal input |
| 56 | FG S | I | Supply side reel FG signal input |
| 57 | C FG | I | Capstan FG signal input |
| 58 | D FG | I | Drum FG signal input |
| 59 | D PG | I | Drum PG signal input |
| 60 | D REF | I | Drum reference signal input |
| 61 | MST CK | I | Hardware master clock (max. 9.408 MHz) |
| 62 | PB DT | I | ATF sync signal playback data |
| 63 | SWP | O | Switching pulse |
| 64 | D PWM | O | Drum PWM output |
| 65 | C PWM | O | Capstan PWM output |
| 66 | PWM R | O | Reel PWM output |
| 67 | NC | | |
| 68 | AGC PWM | O | AGC PWM output |
| 69 | ER MON | I | Error monitor |
| 70 | X TEST | I | Test mode |
| 71 | POW DN | I | |
| 72 | $V_{DD}$ | – | |
| 73 | $V_{SS}$ | – | |
| 74 | NC | | Power down detect |
| 75 | ATF S2 | O | ATF sampling pulse #2 |
| 76 | ATT EXT | O | External attenuator clock |
| 77 | ATF S3 | O | ATF sampling pulse #3 |

| Pin No. | Pin Name | I/O | Description |
|---|---|---|---|
| 78 | MUTE2 | O | CXD1136Q mute |
| 79 | MUTE1 | O | CXD2601Q mute |
| 80 | X DTR | O | Audio ("H")/data recorder ("L") |

## 4-2. BLOCK DIAGRAM

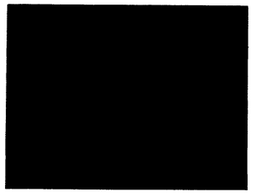



RV.161-1
HEADPHONE AMP IC509
J161 PHONES
PHONES-LEVEL
R-CH
M901 CASSETTE COMPARTMENT MOTOR
CASSETTE COMPARTMENT MOTOR DRIVE IC320
CASS IN
CASS OUT
S11 CASSETTE TABLE IN
S12 CASSETTE TABLE OUT
5V
OFF ON
CASLCKED
CASOVTED
AUDIO AMP IC101, 102 IC201, 202
J151-3 LINE OUT L
Q103 MUTING
RY501 (MUTE)
MUTE SWITCH Q508, 509
EMPHASIS SWITCH Q505, 506
RELAY DRIVE Q507
METER AMP Q510, 511
MIX AMP IC510
M903 CONTROL MOTOR
CONTROL MOTOR DRIVE IC319
LL
LE
PM901 ROTARY ENCODER
FWD
RE STOP
LAMP DRIVE Q304, 322
CAS IN
PL302
PL301
OSC BUFFER IC506
OSC Q502, 503
EMP
R-CH
SAME AS L-CH
SWITCHING Q504
J151-1 LINE IN L
RV151-1 MIC LEVEL
RESET
DADT BCK LRCK
X MUTE
CS1
DB0 DB1 DB2 DB3
AO AI
RD WR CS0
DIGITAL PEAK LEVEL METER IC702
S702 - 740
REMOTE CONTROL RECEIVER IC704
RMC
ADO AD7
DISPLAY CONTROL IC701
GRID DRIVE Q701, 702, 707, 708
1G 2G 7G 8G
3G 6G
FLUORESCENT INDICATOR TUBE FL701
a i X
BUSY XDI XDO SCK CE
RAM IC703
XTEST
INT SC SO SI ACK
XDISPSL DISP CK DISP DAIN DISP DAO DISP SYNC
5V
IC431 MUTE SWITCH
MODE I
L MUTE
LVL SYNC
MECHANISM CONTROL IC312
X TEST
CPWM
CAPDIRRVS
CFG
CAPSTAN MOTOR DRIVE IC314
CAPSTAN MOTOR DRIVE IC316, Q302
M902 U-17A CAPSTAN MOTOR
FG AMP IC101
IC315
PWMR
REEL CW
REEL MOTOR DRIVE IC314
REEL MOTOR DRIVE IC316, Q313
M905 U-16B REEL MOTOR
RV305 (FWD TORQUE)
FGT
FGS
FG BUFFER Q11
FG BUFFER Q21
COMPARATOR IC11
T REEL FG SENSOR PH11
S REEL FG SENSOR PH21
DPWM
DRUM ON
DRUM DIR RVS
DPG
DFG
DRUM MOTOR DRIVE IC314
DRUM MOTOR DRIVE IC102A, Q101A, 102A
DRUM ASSY DOU-02A(1/2)
IC101A PG AMP
FG AMP
TLED ON
T END
SLED ON
S END
SENSOR LED DRIVE Q401
SENSOR LED DRIVE Q402
TAPE TOP DET IC317, 318
TAPE END DET IC317, 318
RV303 (END SENSOR(T))
RV304 (END SENSOR(S))
PH901 TAPE TOP DET
PH902 TAPE END DET
LM SW
REC EN
CAS IN
S902 LIMIT
S901-2 REC PROOF
S901-1 CASSETTE IN
PLN ON
PLN KICK
LPL NON
PLUNGER DRIVE Q318 - 321
PLUNGER DRIVE Q317
PM903 REEL MOTOR CONTROL PLUNGER
PM902 LOADING PLUNGER
XRST
RESET

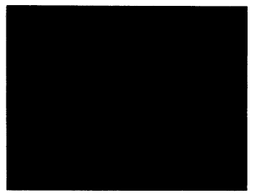

+10V
D913 - 916
+5V (ECC)
+6.6V
+5V
REG IC322
REG IC931
REG IC932
POWER ON/OFF Q921, 925, 931
D901
RESET IC432
RESET IC321
-24V (FL)
REG Q901, 932
D905, 906
AC IN
TO FL TUBE
TO FL TUBE
S701-2 POWER OFF ON
S701-1 POWER OFF ON
POWER ON/OFF Q922
+5V (D/A)
+12V (AUDIO)
+5V (A/D)
-12V (AUDIO)
-5V (A/D)
-5V (D/A)
REG IC507
REG IC523
REG IC524
REG IC508
REG Q902-904, 923
REG Q905-907
D907 - 910
T901 POWER TRANSFORMER
RESET

## 4-3. WAVEFORMS

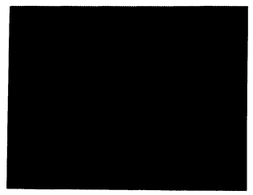
① Q701, Q702 RMITTER



② IC701 ㉑－㉘pin



③ IC701 ①－⑳
⑦⓪－⑧⓪pin



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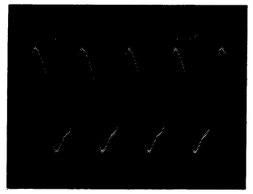
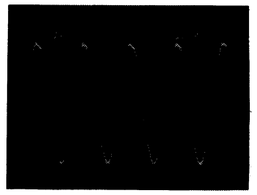
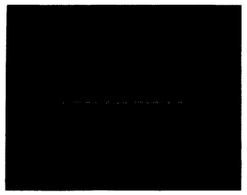


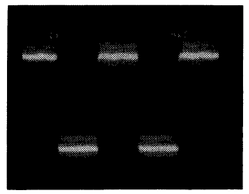
⑤ IC701 ㉛pin



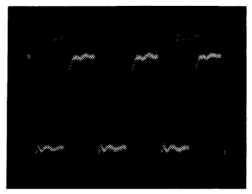
⑥ IC312 ㊱－㊴pin



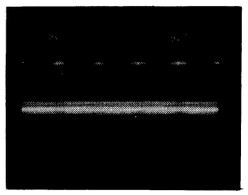
⑦ IC702 ③pin



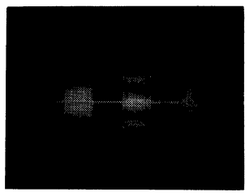
⑧ IC702 ②pin



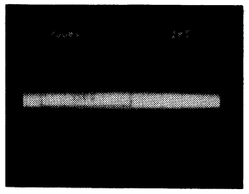
⑨ IC702 ①pin



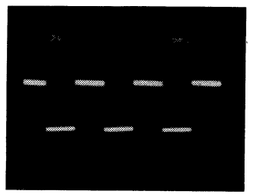
⑩ IC951 ㉕, ㊱pin REC



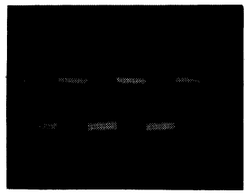
⑪ IC951 ㉕, ㊱pin PLAY



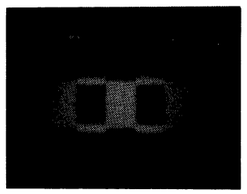
⑫ IC307 ㊷pin REC



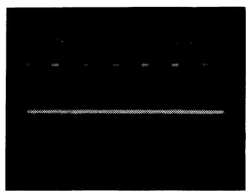
⑬ IC311 ⑨pin PLAY



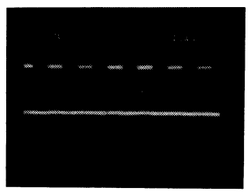
⑭ IC307 ㊲pin PLAY



⑮ IC306 ①pin



⑯ IC306 ㊾pin



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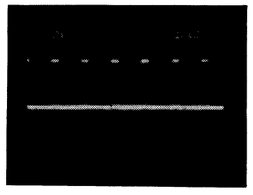
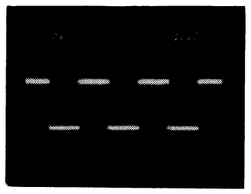
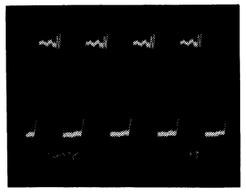


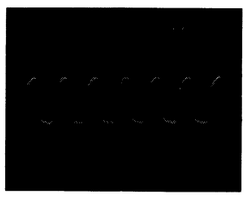
⑱ IC306 ㊻pin



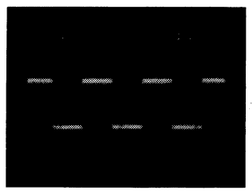
⑲ IC306 ㊶pin



⑳ IC306 ㉘pin XTLI



㉑ IC307 ㊾pin



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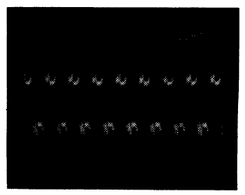

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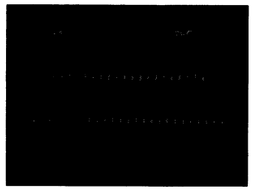
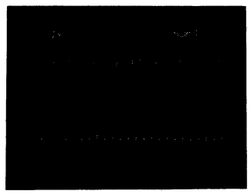
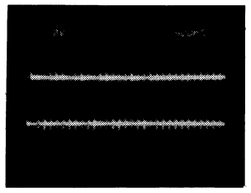


㉔ IC307 ㊻pin



㉕ IC307 ㊹pin



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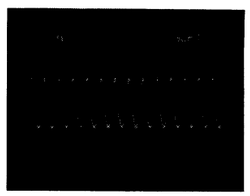
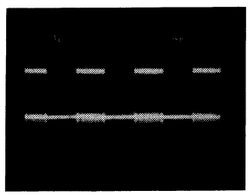


㉗ IC307 ㊸pin REC



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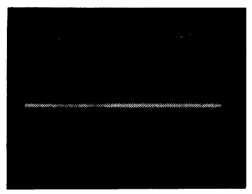

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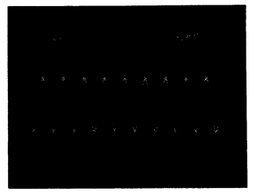

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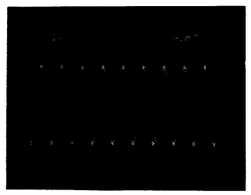
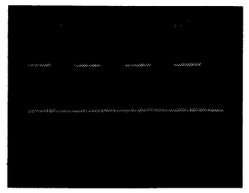
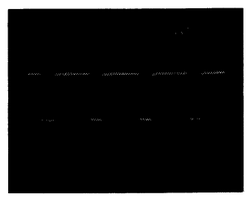


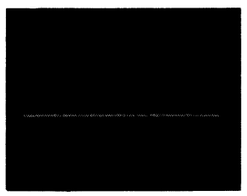
㉛ IC501 ㉖pin BCK



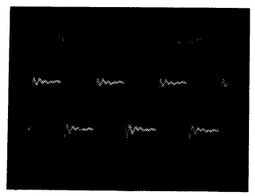
㉜ IC501 ㉕pin WCK



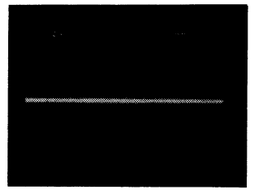
㉝ IC501 ㉓, ㉔pin



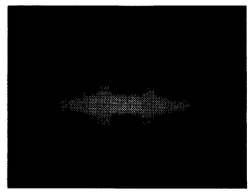
㉞ IC359 ⑳pin



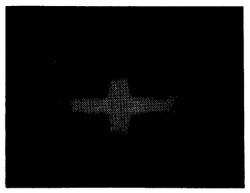
㉟ Q305, 306 COLLECTOR REC



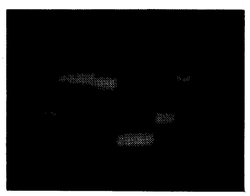
㊱ Q301 EMITTER



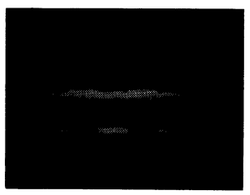
㊲ IC311 ⑤pin PLAY



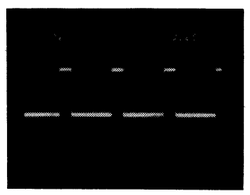
㊳ IC311 ⑧pin PLAY



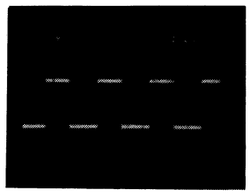
㊴ IC311 ⑲pin PLAY



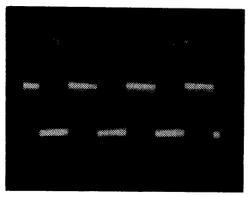
㊵ IC312 ㊺, ㊻pin PLAY



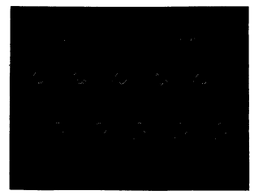
㊶ IC312 ㊹pin PLAY



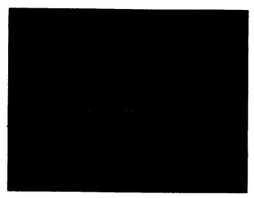
㊷ IC312 ㊿pin PLAY



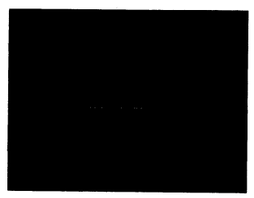
㊸ IC312 ㊺, ㊻pin PLAY



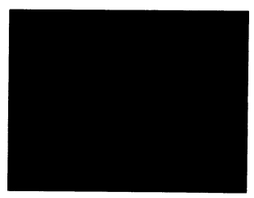
㊹ IC315 ①pin PLAY



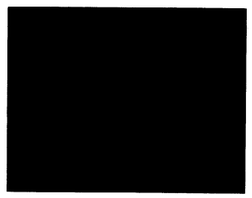
㊺ IC315 ②pin PLAY



㊻ IC315 ⑤pin PLAY

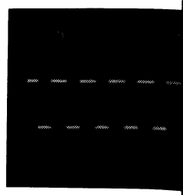


㊼ IC315 ⑥pin PLAY



㊽ IC315 ⑬pin

㊾ IC315 ⑬pin

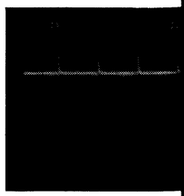


㊿ IC504 ㊴pin

(51) IC504 ⑦pin

(52) IC505 ⑧pin

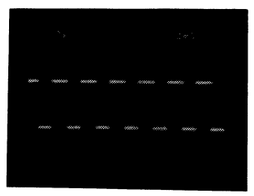
(53) IC505 ①pin



(54) IC502 Source

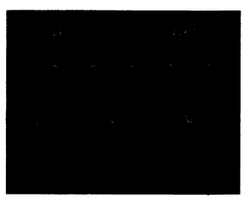
pin

㊾IC315 ⑬pin



⑩pin PLAY

㊿IC504 ㊴pin XIN

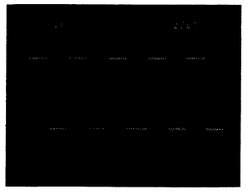


pin PLAY

51IC504 ⑦pin LRCK

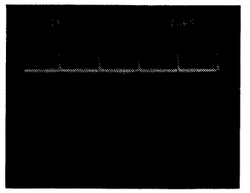
pin PLAY

52IC505 ⑧pin



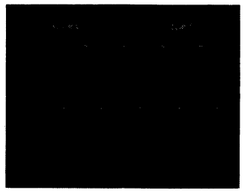
pin PLAY

53IC505 ①pin



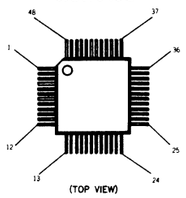
pin

54IC502 Source

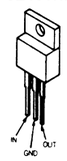


## 4-4. SEMICONDUCTOR LEAD LAYOUT

**CXA1045Q**

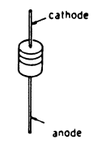



**M5F78M05L**
**M5F78M08L**
**M5F7805L-720**
**μPC2406HF**

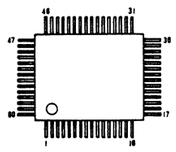



**DTA114ES**
**DTC114ES**
**2SA1175-HFE**
**2SC2785-HFE**

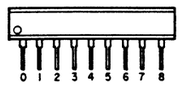
**HZS6A1L**
**1SS168**
**1SS202-1**
**11ES2**




**CXD1136Q**



**M54641L**

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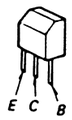
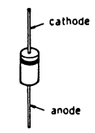
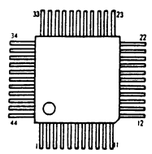
**2SB733-34**
**2SC2676-1F**



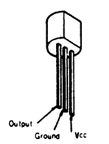

**HZ4CLL**
**10E2N**



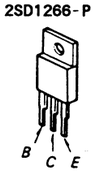

**CXD2552Q-1**
**CXD2552Q-2**



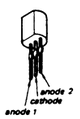
**PST529C**
**PST529E**



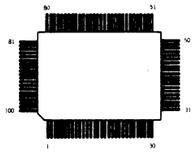

**2SA985A**
**2SB1187-EF**
**2SC2275-P**
**2SD1266-P**




**KV1320**



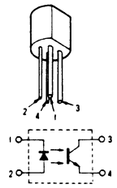

**CXD2601Q**



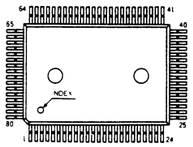
**SC7SU04F**

**2SB1013-4**
**2SC3623A-K**
**2SD1387**

**NJL5141E-AA**



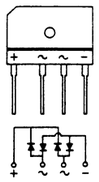
**CXP80524-012Q**
**CXP5058H-652Q**



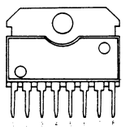
**TC5081AP**

**2SK241GR**

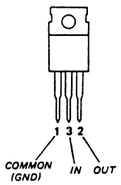
**RBV-406H-01**



**MB3763PS**

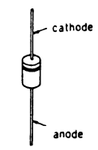


**RC79M05FA**



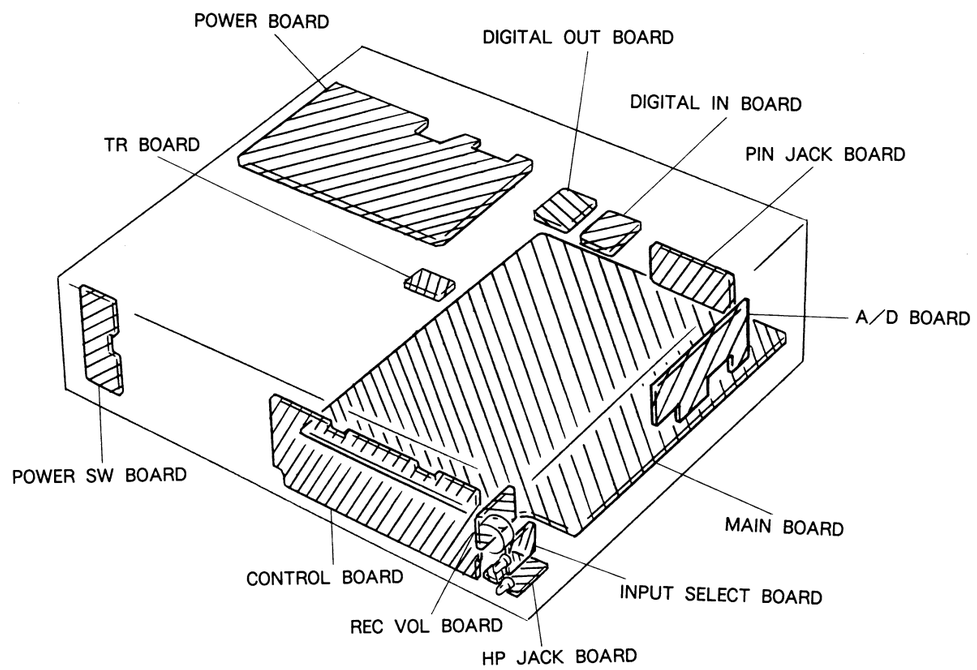

**2SK30A-0**

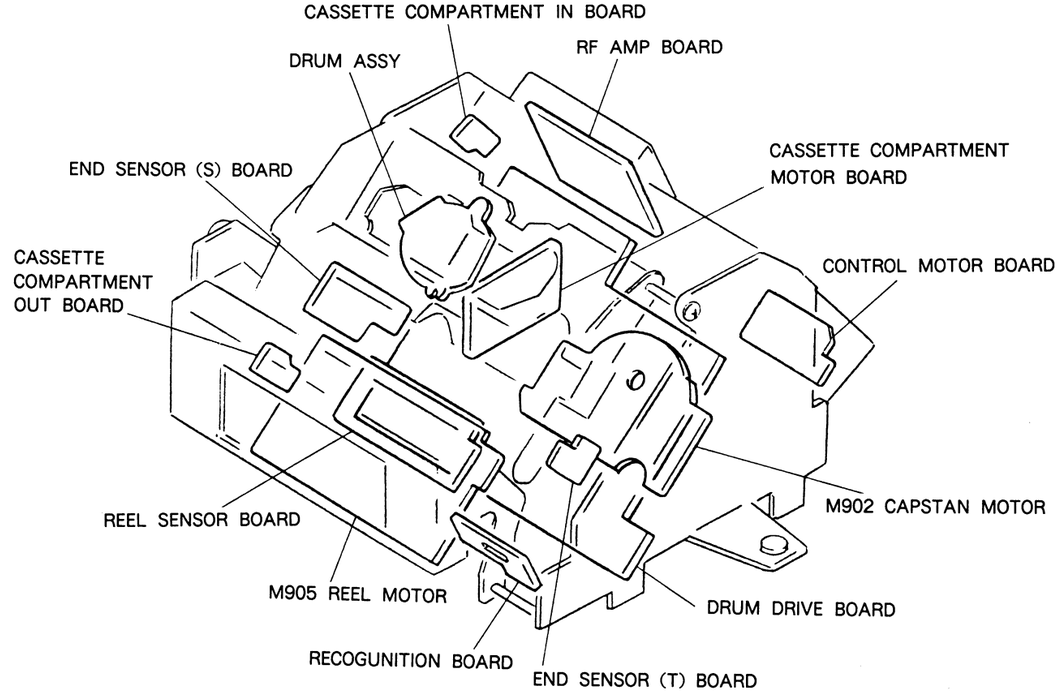
**31DF2-FA**



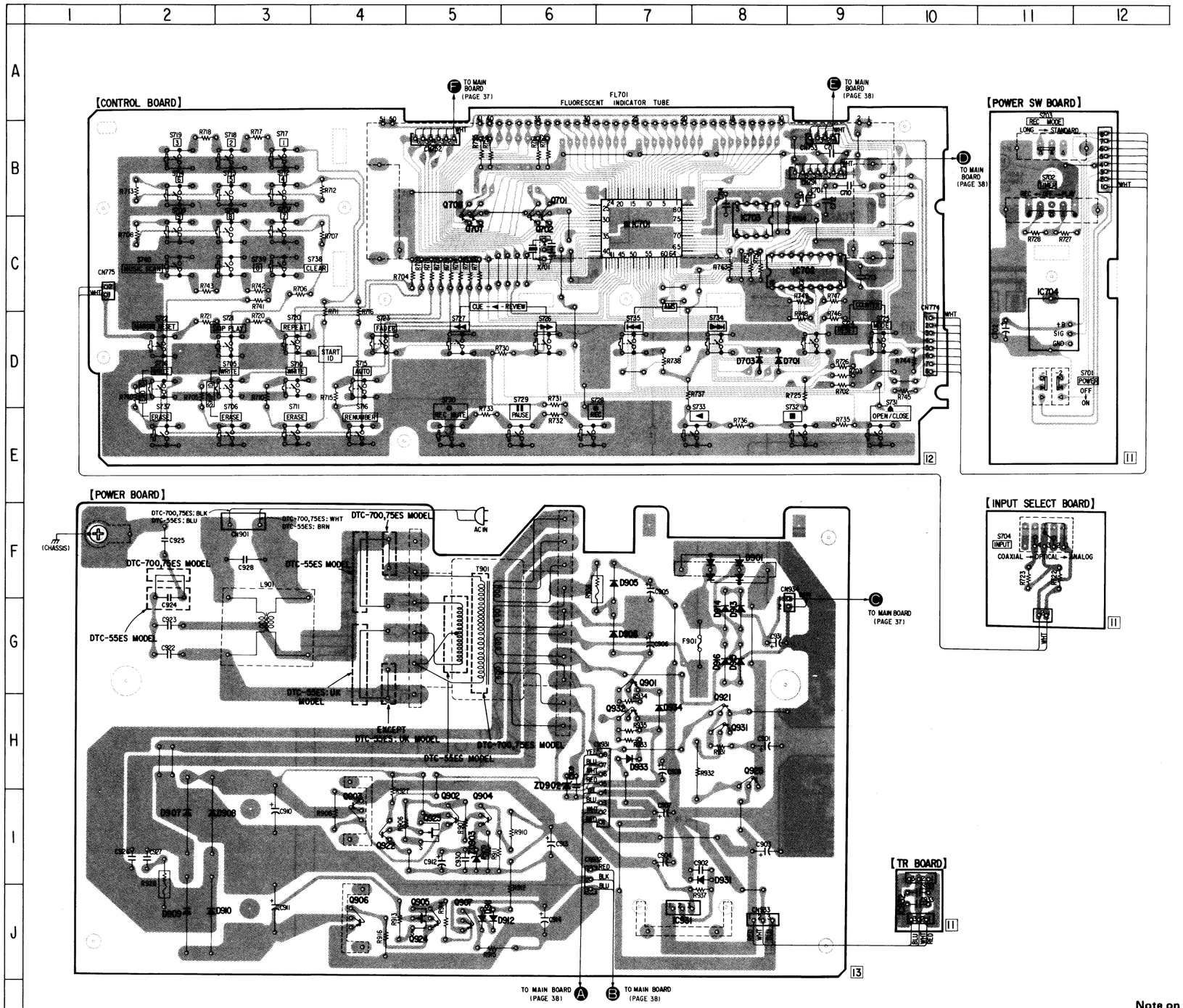



## 4-5. CIRCUIT BOARDS LOCATION



## 4-6. PRINTED WIRING BOARDS – POWER SUPPLY/DISPLAY SECTION –




• Semiconductor Location

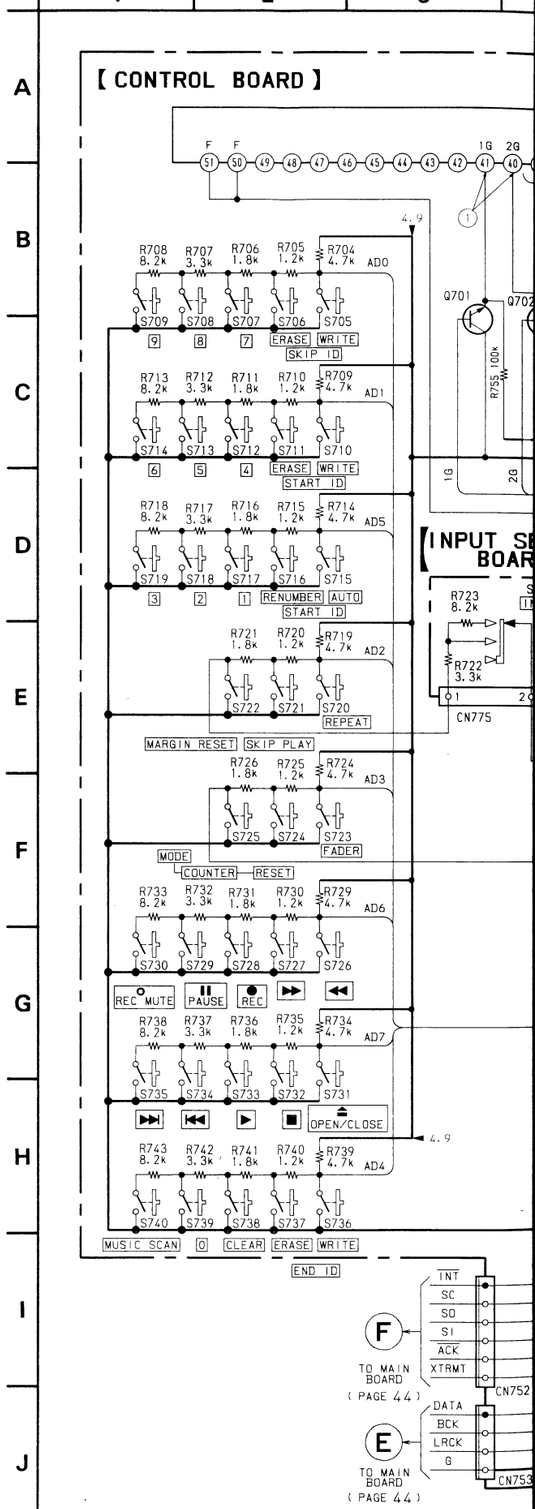
| Ref. No. | Location |
|---|---|
| D701 | D-9 |
| D703 | D-8 |
| D901 | F-8 |
| D905 | F-7 |
| D906 | G-7 |
| D907 | I-2 |
| D908 | I-3 |
| D909 | J-2 |
| D910 | J-3 |
| D911 | J-5 |
| D912 | J-6 |
| D913 | G-8 |
| D914 | G-8 |
| D915 | G-8 |
| D916 | G-8 |
| D931 | I-8 |
| D933 | H-7 |
| D934 | H-7 |
| IC701 | C-7 |
| IC702 | C-9 |
| IC703 | C-8 |
| IC704 | C-11 |
| IC931 | J-7 |
| IC932 | J-10 |
| Q701 | B-6 |
| Q702 | C-6 |
| Q707 | C-5 |
| Q708 | B-5 |
| Q901 | G-7 |
| Q902 | I-5 |
| Q903 | I-4 |
| Q904 | I-5 |
| Q905 | J-5 |
| Q906 | J-4 |
| Q907 | J-5 |
| Q921 | H-8 |
| Q922 | I-4 |
| Q923 | I-5 |
| Q924 | J-5 |
| Q925 | H-8 |
| Q931 | H-8 |
| Q932 | H-7 |
| ZD902 | H-6 |
| ZD903 | I-5 |

**Note on Mounting Diagram:**

- ○—— : parts extracted from the component side.
- ■ : parts mounted on the conductor side.
- ▒▒ : Pattern on the side which is seen.



## 4-7. SCHEMATIC DIAGRAM – POWER SUPPLY/DISPLA

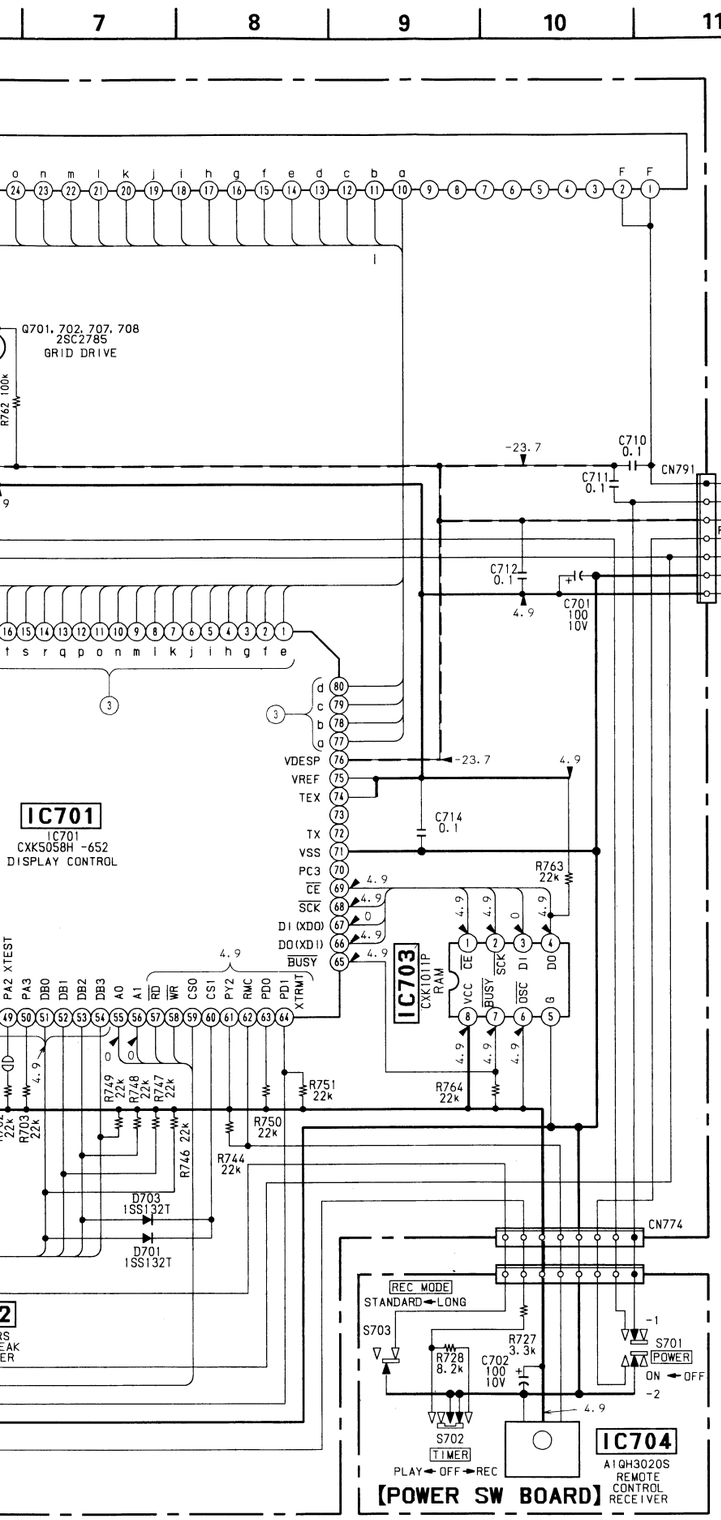


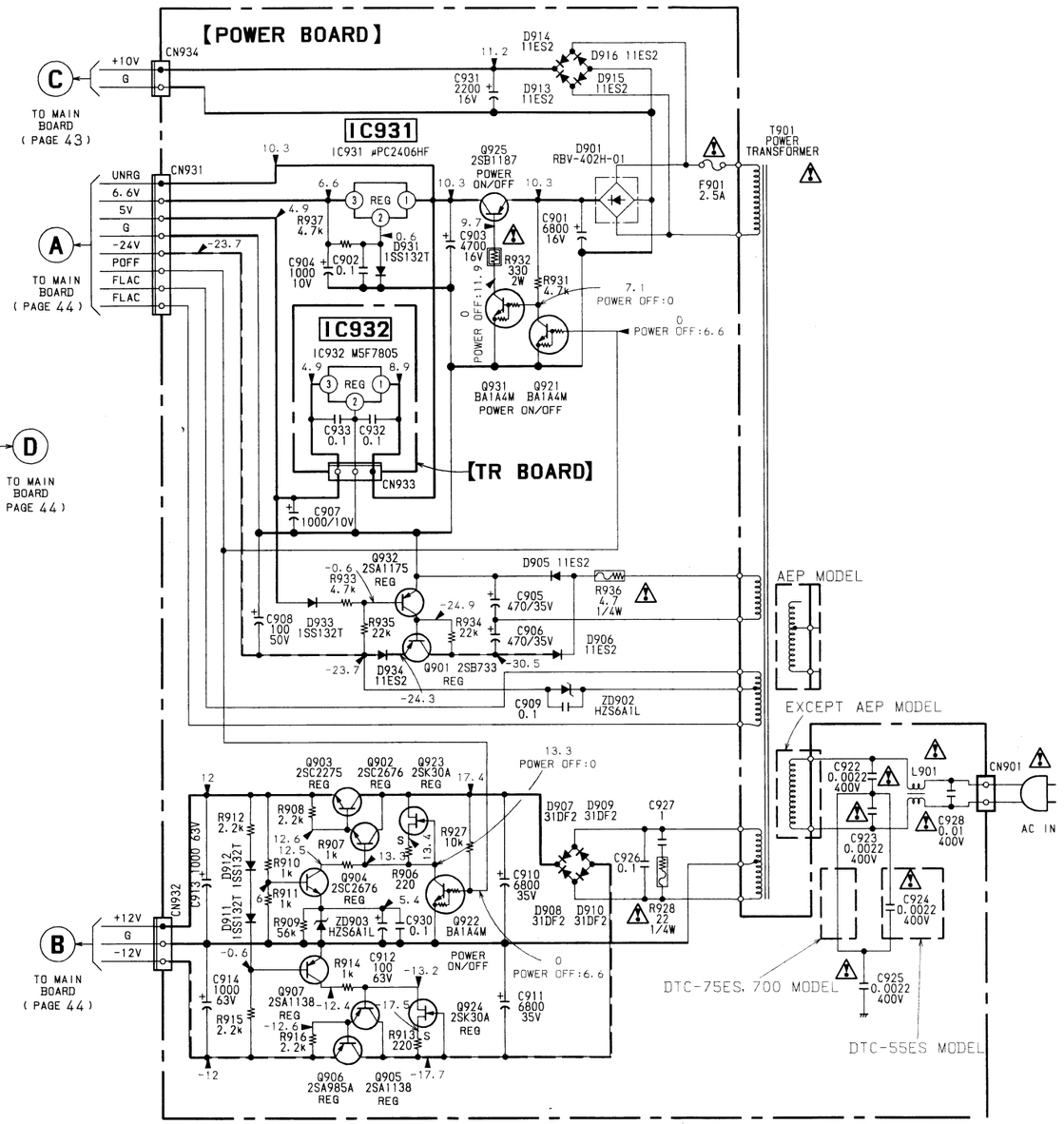
## 4-7. SCHEMATIC DIAGRAM – POWER SUPPLY/DISPLAY SECTION –

Semiconductor Location

| Ref. No. | Location |
|---|---|
| D701 | D-9 |
| D703 | D-8 |
| D901 | F-8 |
| D905 | F-7 |
| D906 | G-7 |
| D907 | I-2 |
| D908 | I-3 |
| D909 | J-2 |
| D910 | J-3 |
| D911 | J-5 |
| D912 | J-6 |
| D913 | G-8 |
| D914 | G-8 |
| D915 | G-8 |
| D916 | G-8 |
| D931 | I-8 |
| D933 | H-7 |
| D934 | H-7 |
| IC701 | C-7 |
| IC702 | C-9 |
| IC703 | C-8 |
| IC704 | C-11 |
| IC931 | J-7 |
| IC932 | J-10 |
| Q701 | B-6 |
| Q702 | C-6 |
| Q707 | C-5 |
| Q708 | B-5 |
| Q901 | G-7 |
| Q902 | I-5 |
| Q903 | I-4 |
| Q904 | I-5 |
| Q905 | J-5 |
| Q906 | J-4 |
| Q907 | J-5 |
| Q921 | H-8 |
| Q922 | I-4 |
| Q923 | I-5 |
| Q924 | J-5 |
| Q925 | H-8 |
| Q931 | H-8 |
| Q932 | H-7 |
| ZD902 | H-6 |
| ZD903 | I-5 |

ram:
ted from the component side.
ted on the conductor side.
the side which is seen.




**Note on Schematic Diagram:**

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- △ : internal component.
- : nonflammable resistor.
- : fusible resistor.

| Note: | Note: |
|---|---|
| The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified. | Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié. |

- ▬▬ : B+ Line
- ▬ ▬ : B– Line
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
  no mark : STOP
- Voltages are taken with a VOM (Input impedance 10M Ω). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
  Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.

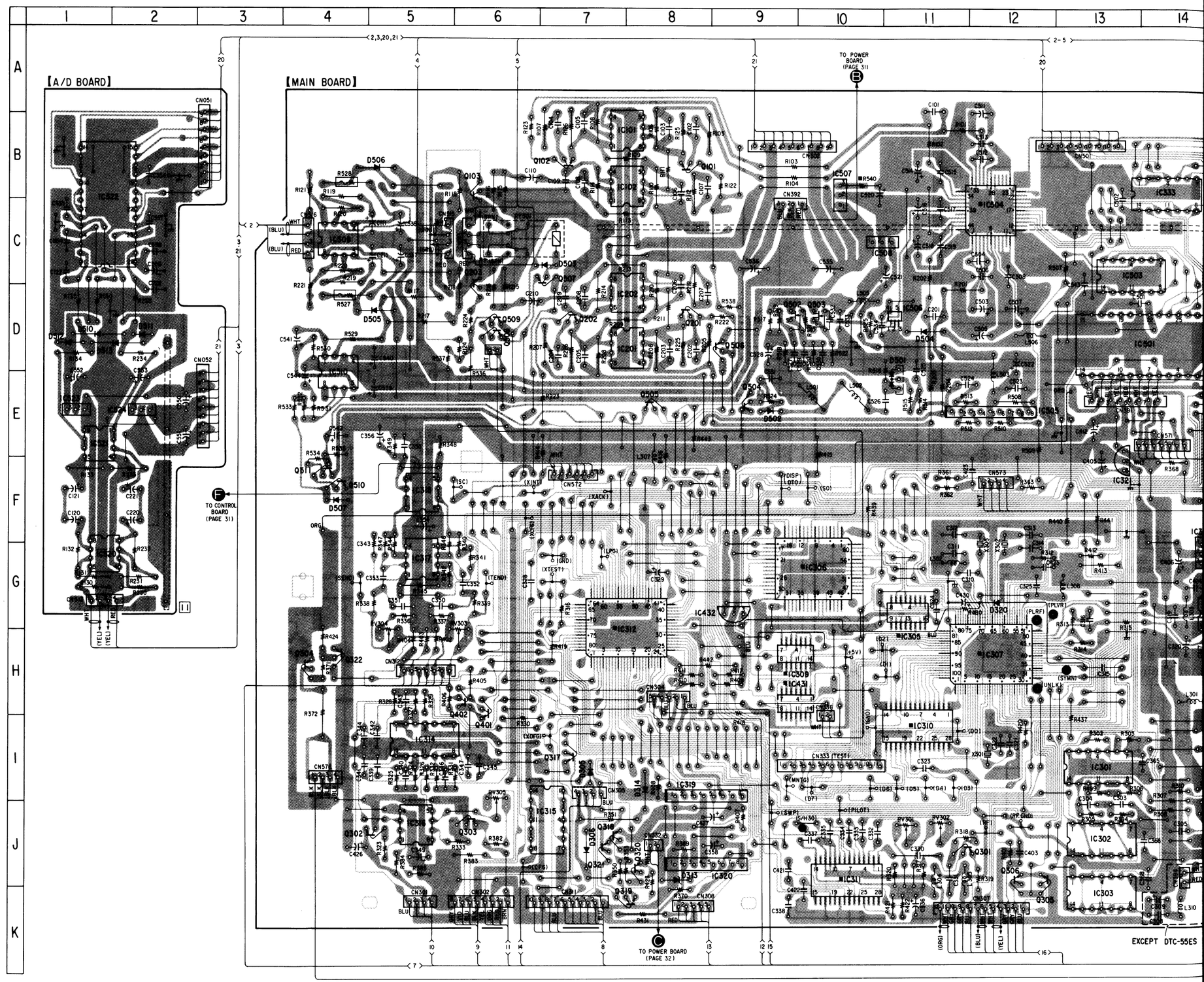
## 4-8. PRINTED WIRING BOARDS – MAIN SECTION –

• Semiconductor Location

| Ref. No. | Location | Ref. No. | Location |
|---|---|---|---|
| D305 | I-7 | IC505 | E-12 |
| D306 | J-7 | IC506 | D-11 |
| D313 | J-8 | IC507 | B-10 |
| D314 | I-8 | IC508 | C-10 |
| D320 | G-12 | IC509 | C-4 |
| D501 | D-11 | IC510 | E-4 |
| D502 | E-9 | IC520 | G-1 |
| D503 | C-7 | IC521 | E-1 |
| D504 | D-11 | IC522 | B-1 |
| D505 | D-5 | IC523 | E-1 |
| D506 | B-5 | IC524 | E-2 |
| D507 | F-4 | IC951 | I-27 |
| D510 | D-1 | | |
| D511 | D-2 | PH11 | J-23 |
| D512 | D-1 | PH21 | J-24 |
| D513 | D-1 | PH901 | G-21 |
| | | PH902 | J-22 |
| IC11 | J-23 | | |
| IC101A | C-22 | Q11 | I-23 |
| IC101 | B-7 | Q21 | J-23 |
| IC102A | B-22 | Q101A | B-23 |
| IC102 | B-7 | Q101 | B-8 |
| IC201 | D-8 | Q102A | C-23 |
| IC202 | D-8 | Q102 | B-7 |
| IC301 | I-13 | Q103 | B-6 |
| IC302 | J-13 | Q201 | D-8 |
| IC303 | K-13 | Q202 | D-7 |
| IC304 | J-15 | Q203 | C-6 |
| IC305 | H-11 | Q301 | J-12 |
| IC306 | G-10 | Q302 | J-4 |
| IC307 | H-12 | Q303 | J-6 |
| IC308 | G-15 | Q304 | H-4 |
| IC309 | H-10 | Q305 | K-12 |
| IC310 | I-11 | Q306 | J-12 |
| IC311 | J-10 | Q317 | I-7 |
| IC312 | G-8 | Q318 | J-7 |
| IC314 | I-5 | Q319 | K-8 |
| IC315 | J-7 | Q320 | J-8 |
| IC316 | J-5 | Q321 | J-7 |
| IC317 | G-5 | Q322 | H-4 |
| IC318 | F-5 | Q401 | I-6 |
| IC319 | I-8 | Q402 | I-6 |
| IC320 | J-9 | Q502 | D-9 |
| IC321 | F-13 | Q503 | D-10 |
| IC322 | F-14 | Q504 | E-9 |
| IC331 | H-15 | Q505 | E-8 |
| IC332 | I-15 | Q506 | D-9 |
| IC333 | B-14 | Q507 | C-7 |
| IC431 | H-10 | Q508 | D-6 |
| IC432 | G-8 | Q509 | D-6 |
| IC501 | D-14 | Q510 | F-4 |
| IC503 | C-13 | Q511 | F-4 |
| IC504 | C-12 | | |

**Note on Mounting Diagram:**

- ○—— : parts extracted from the component side.
- —— : parts extracted from the conductor side.
- ■ : parts mounted on the conductor side.
- ● : Through hole.
- ○—○ : Jumper wire connected to the ground pattern on the component side.
- ▒▒ : Pattern on the side which is seen.
- ▒▒ : Pattern of the rear side.



TO POWER BOARD (PAGE 31) B

A TO POWER BOARD (PAGE 31)

D TO CONTROL BOARD (PAGE 32)

E TO CONTROL BOARD (PAGE 31)

DIGITAL IN OPTICAL

DIGITAL OUT OPTICAL

EXCEPT DTC-55ES MODEL

【PIN JACK BOARD】

【REC VOL BOARD】

【HP VOL BOARD】

【HP JACK BOARD】

【DIGITAL IN BOARD】

【DIGITAL OUT BOARD】

EXCEPT DTC-55ES MODEL

【DRUM DRIVE BOARD】

【END SENSOR(T) BOARD】

【RECOGUNITION BOARD】

S901-1 CASSETTE IN

S901-2 REC PROOF

【END SENSOR(S) BOARD】

【CASSE-COM MOTOR BOARD】

【CASSE-COM IN BOARD】

【CASSE-COM OUT BOARD】

【CONTROL MOTOR BOARD】

【REEL SENSOR BOARD】

【RF AMP BOARD】(CONDUCTOR SIDE)

【RF AMP BOARD】(COMPONENT SIDE)

【DRUM DRIVE BOARD】

【CASSE-COM MOTOR BOARD】

【CASSE-COM IN BOARD】

【CASSE-COM OUT BOARD】

MECHANISM ASSY TOP VIEW

【HP JACK BOARD】

EXCEPT DTC-55ES MODEL

【END SENSOR(T) BOARD】

【RECOGUNITION BOARD】

【END SENSOR(S) BOARD】

【CONTROL MOTOR BOARD】

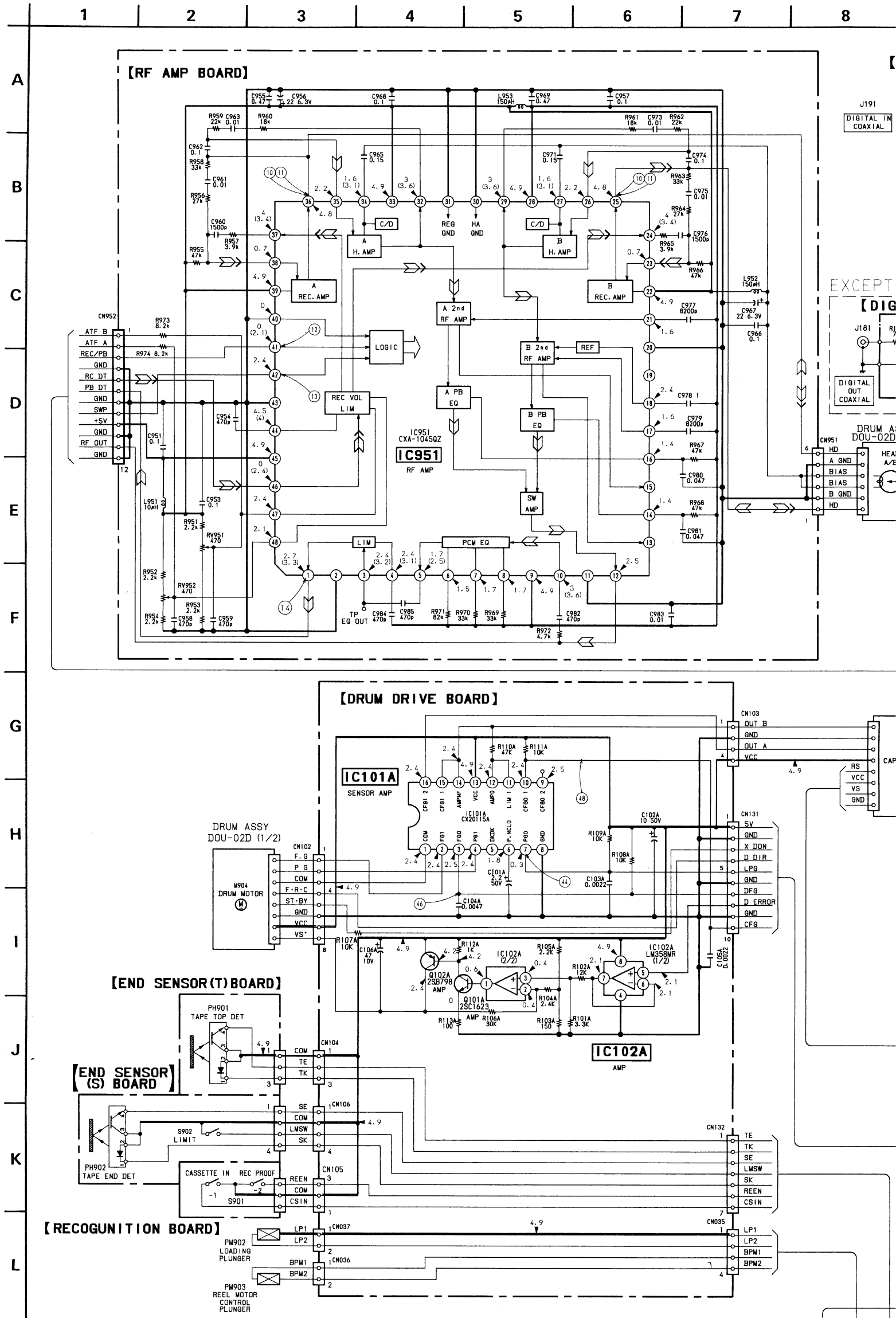
【REEL SENSOR BOARD】

【RF AMP BOARD】(CONDUCTOR SIDE)

【RF AMP BOARD】(COMPONENT SIDE)

MECHANISM ASSY BOTTOM VIEW

## 4-9. SCHEMATIC DIAGRAM – MAIN SECTION –




**Note on Schematic Diagram:**

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- % : indicates tolerance.
- ⏦ : fusible resistor.

| | |
|---|---|
| **Note:**<br>The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.<br>Replace only with part number specified. | **Note:**<br>Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.<br>Ne les remplacer que par une pièce portant le numéro spécifié. |

- ▬▬ : B+ Line
- ▬ ▬ : B– Line
- ▭ : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
  no mark : STOP
  ( ) : PLAY
- Voltages are taken with a VOM (Input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ▷ : PB
  ▷» : REC

【DIGITAL IN BOARD】

【DIGITAL OUT BOARD】

XCEPT DTC-55ES MODEL

【MAIN BOARD】

IC301 SN74HC04N BUFFER

IC302 TC74HC132AP OPTICAL/COAXIAL SWITCH

IC303 SN74HC04N BUFFER

IC304 LM358P AMP

IC305 SN74HC153NS MULTIPLEXER

IC306 CXD1136Q DIGITAL FILTER

IC307 CXD2601Q ERROR CORECTION, A/D D/A INTERFACE, MODURATION, DEMODURATION, SUB-CODE DECODE

IC309 SN74HC74NS D-FLIP FLOP

IC310 CXK58257M-12L RAM

IC311 CXA1046M ATF

IC312 CXP80524-012Q MECHANISM CONTROL

IC314 LM324N MOTOR DRIVE

IC315 SN74HC14N INVERTING SCHMITT TRIGER

IC316 LM358P MOTOR DRIVE

IC317 LM393P TAPE TOP/END DET

IC318 LM358P

IC319 MB3763PS CONTROL MORTOR DRIVE

IC322 M5F78M05

J191 DIGITAL IN COAXIAL

IC331 GP1F31R DIGITAL IN OPTICAL

IC332 GP1F31T DIGITAL OUT OPTICAL

J181 DIGITAL OUT COAXIAL

CN393 2P (D IN, G)

CN394 2P (D OUT, G)

CN333 11P TEST (SWP, MNTG, D7, D6, D5, D4, D3, D2, D1, D0, G)

CN307 12P (ATFB, ATFA, REPB, G, REDT, PBDT, G, SWP, +5V, G, PBRF, G)

CN301 4P (G, CERR, +5V, CDIR)

CN311 10P (+5V, G, XDON, DDIR, LPG, G, DFG, DERR, G, CFG)

CN302 8P (RERR, +5V, G, CW, +5V, FGS, FGT, G)

CN312 7P (TE, TK, SE, LMSW, SK, REEN, CSIN)

CN391 8P (UNREG, 6.6V, +5V, G, -24V)

CN576 4P (G, LAMP+, G, LAMP+)

CN305 4P (LP1, LP2, BPW1, BPW2)

CN332 2P (+10V, G)

CN304 5P (LM+, LM-, STP, FWD, +5V)

W902 U-17A CAPSTAN MOTOR (RS, VCC, VS, GND)

M905 U-16B REEL MOTOR

DRUM ASSY DOU-02D (1/2) (GND, AS, AS, GND, HEAD A/B)

Q305 BA1A4M BUFFER

Q306 BA1A4M BUFFER

Q301 2SC2785 RF AMP

Q302 2SD1387 CAPSTAN MOTOR DRIVE

Q303 2SD1266 REEL MOTOR DRIVE

Q401 2SC2785 SENSOR LED DRIVE

Q402 2SC2785

Q304 2SB1013 LAMP DRIVE

Q317 BA1A4M PLUNGER DRIVE

Q318 BA1A4M

Q319 BA1A4M

Q320 2SB1013

Q321 2SD1387

Q322 BA1A4M LAMP SWITCH

D320 1SS132T

D305 1SS132T

D314 11ES2

D306 11ES2

D313 HZ4CLL

PL302

PL301

TO POWER BOARD (PAGE34)

【CONTROL MOTOR BOARD】

M903 CONTROL MOTOR

CN034

MAIN BOARD】

A TO POWER BOARD ( PAGE34)
D TO CONTROL BOARD ( PAGE34)
E TO CONTROL BOARD ( PAGE33)
B TO POWER BOARD ( PAGE34)

CN391 8P: UNREG, 6.6V, +5V, G, -24V, POFF, FL, FL
CN571 7P: +5V, G, XRST, POFF, -24V, FL, FL
CN573 4P: DADT, BCK, LRCK, G
CN392 3P: +12V, G, -12V

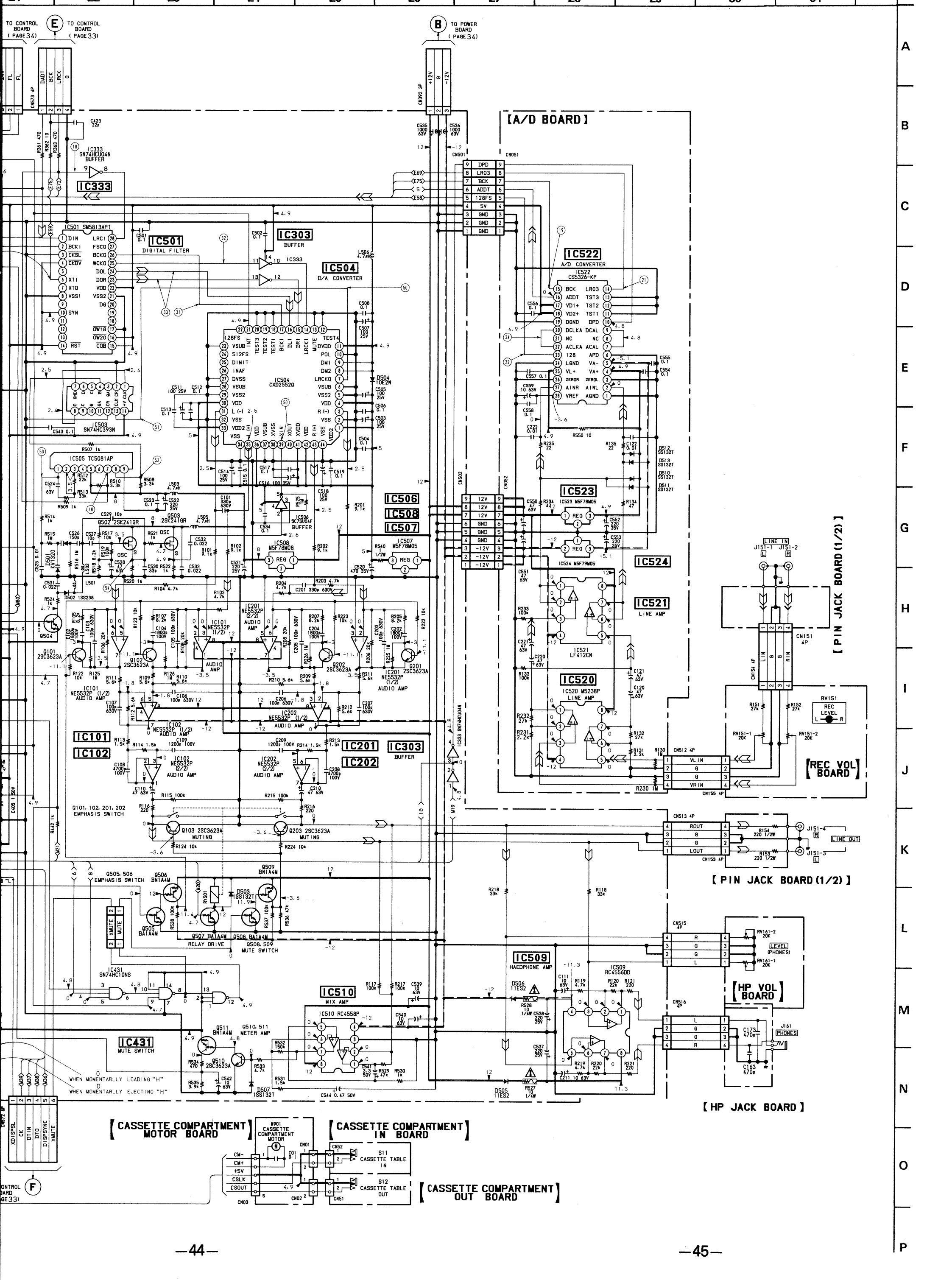
IC322 M5F78M05 REG
IC333 SN74HCU04N BUFFER
IC501 SM5813APT DIGITAL FILTER
IC303 BUFFER
IC504 D/A CONVERTER
IC307 IC307 CXD2601Q ERROR CORECTION. A/D D/A INTERFACE. MODURATION. DEMODURATION. SUB-CODE DECODE
IC308 IC308 SN74LS624N VCO
IC503 SN74HC393N COUNTER
IC505 IC505 TC5081AP PHASE COMPARATOR
IC506 IC506 SC7SU04F BUFFER
IC508 M5F78M08 REG
IC507 M5F78M05 REG
IC312 IC312 CXP80524-012Q MECHANISM CONTROL
IC432 PST529C RESET
IC321 PST529E RESET
IC319 MB3763PS CONTROL MORTOR DRIVE
IC320 M54641L CASSETTE COMPARTMENT MORTOR DRIVE
IC431 SN74HC10NS MUTE SWITCH
IC101 NE5532P (1/2) AUDIO AMP
IC102 NE5532P (1/2) AUDIO AMP
IC201 NE5532P (2/2) AUDIO AMP
IC202 NE5532P (2/2) AUDIO AMP
IC303 BUFFER
IC509 HAEDPHONE AMP
IC510 IC510 RC4558P MIX AMP
Q504 BN1A4M SWITCHING
Q101, 102, 201, 202 EMPHASIS SWITCH
Q103 2SC3623A MUTING
Q203 2SC3623A MUTING
Q505, 506 EMPHASIS SWITCH
Q507 BA1A4M RELAY DRIVE
Q508, 509 MUTE SWITCH
Q510, 511 METER AMP
Q320 2SB1013
Q318 BA1A4M
Q319 BA1A4M
Q321 2SD1387
D314 11ES2
D306 11ES2
D313 HZ4CLL
D501 KV1320
D502 1SS238
D503 1SS132T
D504 10E2N
D505 11ES2
D506 11ES2
D507 1SS132T
RY501
X301 18.816MHz
X303 49.152MHz
L302 1.2mH
L303 10mH
L306 10mH
L307 10mH
L501
L503 4.7mH
L505 4.7mH
L506 4.7mH

【A/D BOARD】
CN051: DPD, LRO3, BCK, ADDT, 128FS, 5V, GND, GND, GND
CN501: +12V, G, -12V
CN502: 12V, 12V, 12V, GND, GND, GND, -12V, -12V, -12V
CN052

CONTROL MOTOR BOARD】
CN305 4P: LP1, LP2, BPW1, BPW2
CN332 2P: +10V, G
CN304 5P: LM+, LM-, STP, FWD, +5V
CN308 5P: CSOUT, CSLK, +5V, CM+, CM-
CN572 6P: XDISPSL, CK, DTIN, DTO, DISPSYNC, XMUTE
M903 CONTROL MOTOR
PM901 ROTARY ENCODER
PL301
TO POWER BOARD ( PAGE34) C
TO CONTROL BOARD ( PAGE33) F

【CASSETTE COMPARTMENT MOTOR BOARD】
M901 CASSETTE COMPARTMENT MOTOR
CN03: CM-, CM+, +5V, CSLK, CSOUT
CN01, CN02, CN51, CN52
S11 CASSETTE TABLE IN
S12 CASSETTE TABLE OUT
【CASSETTE COMPARTMENT IN BOARD】
【CASSETTE COMPARTMENT OUT BOARD】

WHEN MOMENTARLLY LOADING "L"
WHEN MOMENTARLLY EJECTING "L"
WHEN MOMENTARLLY LOADING "H"
WHEN MOMENTARLLY EJECTING "H"
COAXIAL: 4.8 OPTICAL: 0 DIGITAL: 4.8
Play: 4.8 Rec: 0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K
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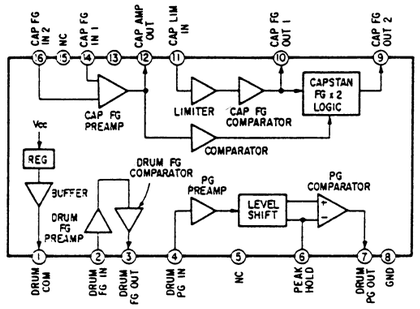
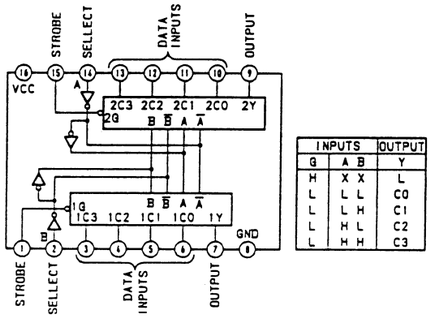
O
P
TO CONTROL BOARD ( PAGE34)
E
TO CONTROL BOARD ( PAGE33)
B
TO POWER BOARD ( PAGE34)
CN573 4P
DADT
BCK
LRCK
G
FL
FL
CN392 3P
+12V
G
-12V
【A/D BOARD】
CN501
CN051
DPD
LRO3
BCK
ADDT
128FS
5V
GND
GND
GND
IC333
SN74HCU04N
BUFFER
IC501 SM5813APT
DIGITAL FILTER
IC303
BUFFER
IC504
D/A CONVERTER
CXD2552Q
IC503
SN74HC393N
IC505 TC5081AP
IC506
IC508
IC507
IC506 9C7SU04F
BUFFER
IC508 M5F78M08
REG
IC507 M5F78M05
REG
Q502 2SK241GR
Q503 2SK241GR
OSC
IC522
A/D CONVERTER
IC522 CS5326-KP
IC523
IC523 M5F78M05
REG
IC524
IC524 M5F79M05
REG
IC521
LINE AMP
IC521 LF412CN
IC520
IC520 M5238P
LINE AMP
IC101
IC102
IC201
IC202
IC303
BUFFER
IC101 NE5532P (1/2) AUDIO AMP
IC102 NE5532P (1/2) AUDIO AMP
IC201 NE5532P (2/2) AUDIO AMP
IC202 NE5532P (2/2) AUDIO AMP
Q101 2SC3623A
Q102 2SC3623A
Q202 2SC3623A
Q201 2SC3623A
Q101, 102, 201, 202 EMPHASIS SWITCH
Q103 2SC3623A MUTING
Q203 2SC3623A MUTING
Q505, 506 EMPHASIS SWITCH
Q505 BA1A4M
Q506 BN1A4M
Q507 BA1A4M RELAY DRIVE
Q508, 509 BA1A4M MUTE SWITCH
Q509 BN1A4M
RY501
D503 1SS132T
XMUTE
MUTE
IC431
SN74HC10NS
MUTE SWITCH
IC431
IC510
MIX AMP
IC510 RC4558P
Q511 BN1A4M
Q510, 511 METER AMP
Q510 2SC3623A
D507 1SS132T
IC509
HAEDPHONE AMP
IC509 RC4556DD
D506 11ES2
D505 11ES2
D512 SS132T
D513 SS132T
D510 SS132T
D511 SS132T
D504 10E2N
D502 1SS238
WHEN MOMENTARLLY LOADING "H"
WHEN MOMENTARLLY EJECTING "H"
【PIN JACK BOARD(1/2)】
LINE IN
J151-1
J151-2
CN154 4P
CN151 4P
RV151
REC LEVEL
【REC VOL BOARD】
CN512 4P
VLIN
G
G
VRIN
CN155 4P
CN513 4P
ROUT
G
G
LOUT
CN153 4P
J151-4
J151-3
LINE OUT
【PIN JACK BOARD(1/2)】
CN515 4P
CN516 4P
RV161-2 20K
RV161-1 20K
LEVEL (PHONES)
【HP VOL BOARD】
J161
PHONES
【HP JACK BOARD】
CN572 8P
XDISPSL
CK
DTIN
DTO
DISPSYNC
XMUTE
CONTROL BOARD (PAGE33)
【CASSETTE COMPARTMENT MOTOR BOARD】
M901 CASSETTE COMPARTMENT MOTOR
CM-
CM+
+5V
CSLK
CSOUT
CN03
CN02
CN01
【CASSETTE COMPARTMENT IN BOARD】
S11 CASSETTE TABLE IN
S12 CASSETTE TABLE OUT
CN52
CN51
【CASSETTE COMPARTMENT OUT BOARD】

## 4-10. IC BLOCK DIAGRAM

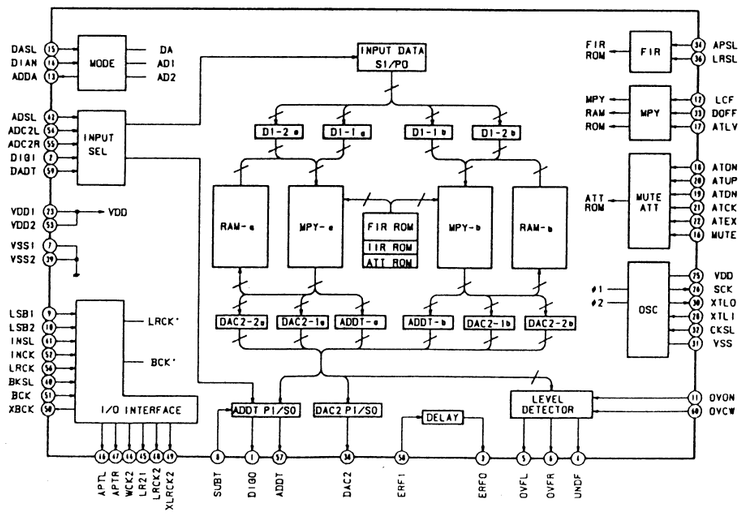
IC101 CX20115A



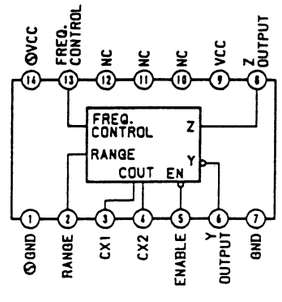

IC305 SN74HC153NS



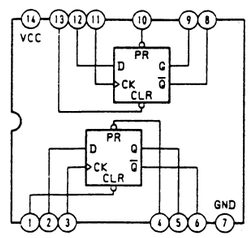

IC306 CXD1136Q



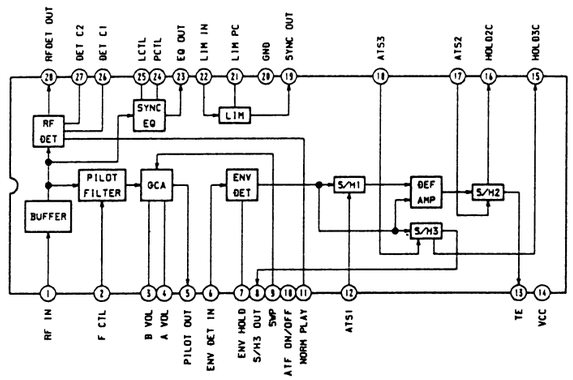

IC308 SN74LS624N



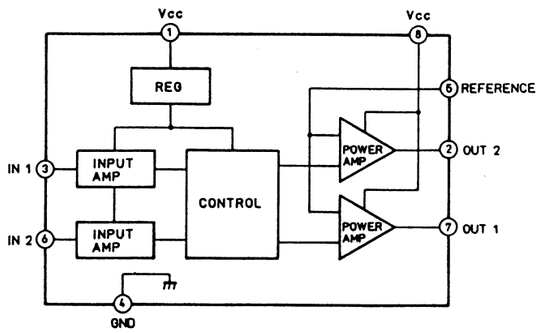

IC309 SN74HC74NS



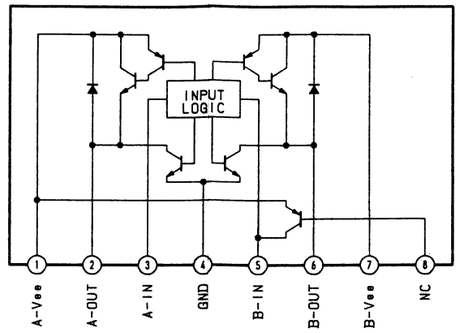

IC311 CXA1046M



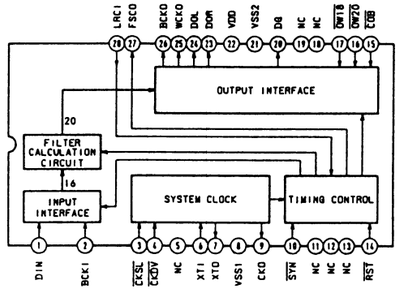

IC320 M54641L



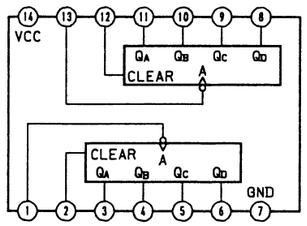

IC319 MB3763PS



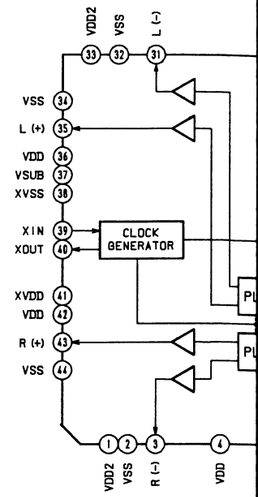

IC501 SM5813ATP



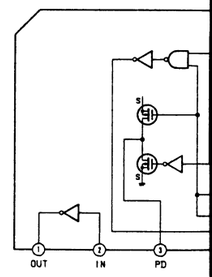

IC503 SN74HC393N



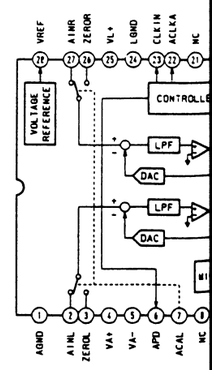

IC504 CXD2552

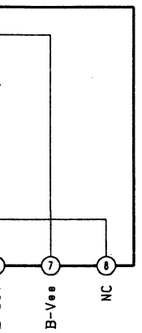



IC505 TC5081AP

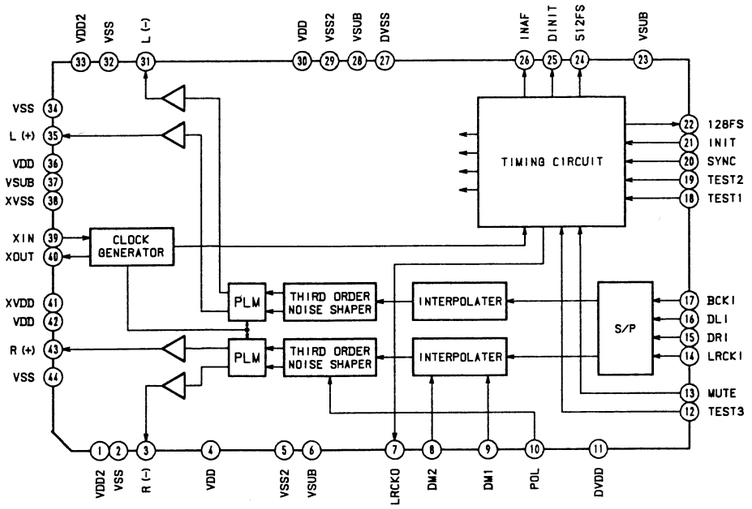



IC522 CS5326-KP

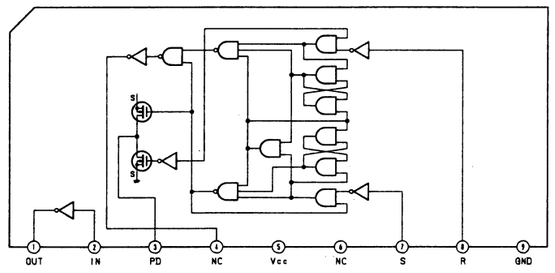




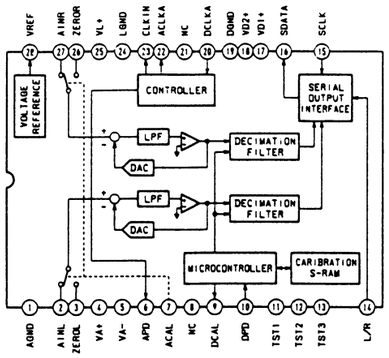

IC504 CXD2552




IC505 TC5081AP




IC522 CS5326-KP





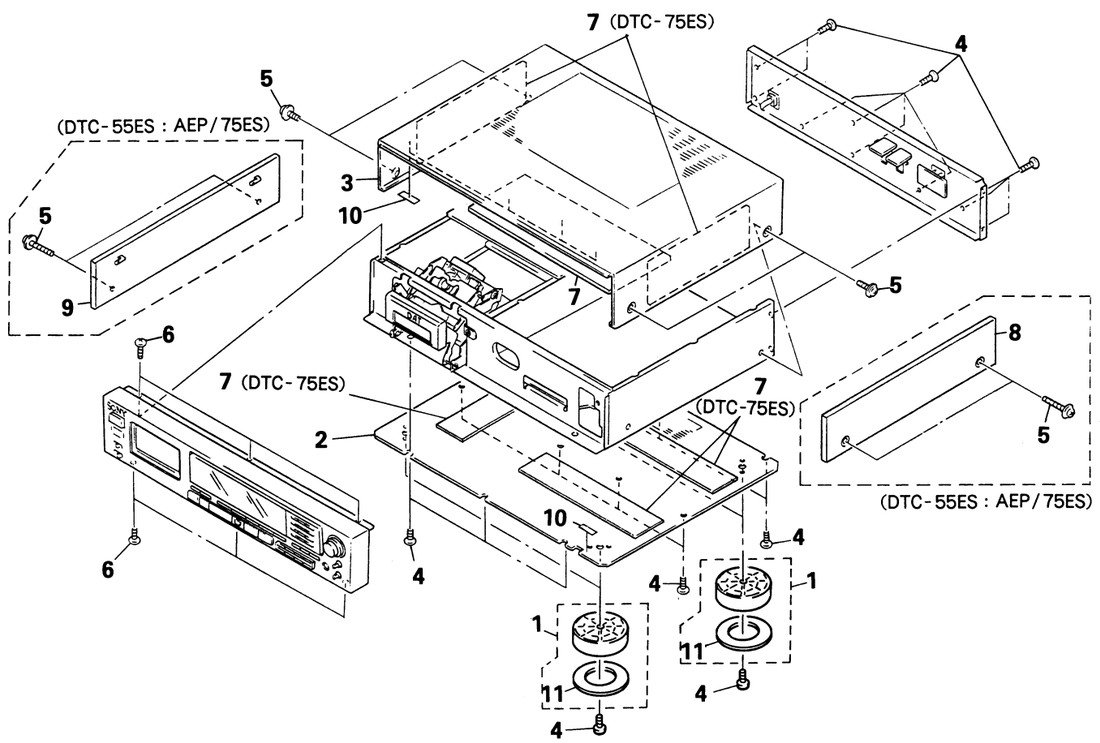

# SECTION 5
# EXPLODED VIEWS

**NOTE:**

- The mechanical parts with no reference number in the exploded views are not supplied.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part number suffix -XX and -X may be different from the parts specified in the components used on the set.
- Color Indication of Appearance Parts
  Example:
  (RED) . . . KNOB, BALANCE (WHITE)
  ↑ ↑
  Cabinet's Color Parts' Color

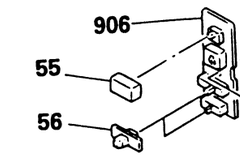
| |
|---|
| The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.<br>Replace only with part number specified. |
| Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.<br>Ne les remplacer que par une pièce portant le numéro spécifé. |

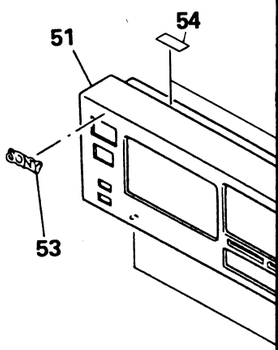
## 5-1. CABINET SECTION



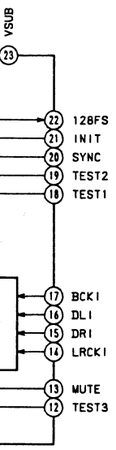

| No. | Part No. | Description | Remarks |
|---|---|---|---|
| 1 | X-3304-938-2 | FOOT ASSY | |
| 2 | *4-931-433-11 | PLATE, BOTTOM | |
| 3 | 3-350-407-41 | CASE | |
| 4 | 7-682-548-09 | SCREW +BVTT 3X8 (S) | |
| 5 | 3-704-366-01 | (55ES:UK/700)....SCREW (CASE) (M3X8) | |
| | 4-933-446-01 | (55ES:AEP/75ES)...SCREW (SIDE PANEL) | |
| 6 | 7-682-547-09 | SCREW +B 3X6 | |
| 7 | *4-936-612-01 | RUBBER (DAMPER) | |
| 8 | *X-4919-028-1 | (55ES:AEP/75ES)...PANEL (R) ASSY, SIDE | |
| 9 | *X-4919-027-1 | (55ES:AEP/75ES)...PANEL (L) ASSY, SIDE | |
| 10 | 3-831-441-XX | CUSHION, SPEAKER | |
| 11 | 4-923-836-11 | CUSHION | |

## 5-2. FRONT PANEL SECTIO




| No. | Part No. | Description |
|---|---|---|
| 51 | 4-936-605-11 | (700)..... |
| | 4-936-605-21 | (55ES:AEP). |
| | 4-936-605-31 | (55ES:UK).. |
| | 4-936-605-41 | (75ES)..... |
| 52 | 3-332-590-01 | KNOB (REC V |
| 53 | 4-908-848-01 | EMBLEM, SON |
| 54 | 3-831-441-XX | CUSHION, SP |
| 55 | 4-922-921-01 | BUTTON (POW |
| 56 | 4-931-421-01 | KNOB (T & S |
| 57 | 4-931-482-01 | WINDOW (FL |
| 58 | *4-925-758-11 | COVER (L), |
| 59 | X-4919-024-1 | ESCUTCHEON |
| 60 | 4-923-782-21 | BUTTON (10 |
| 61 | 4-931-483-01 | PLATE (HP V |




# SECTION 5
# EXPLODED VIEWS

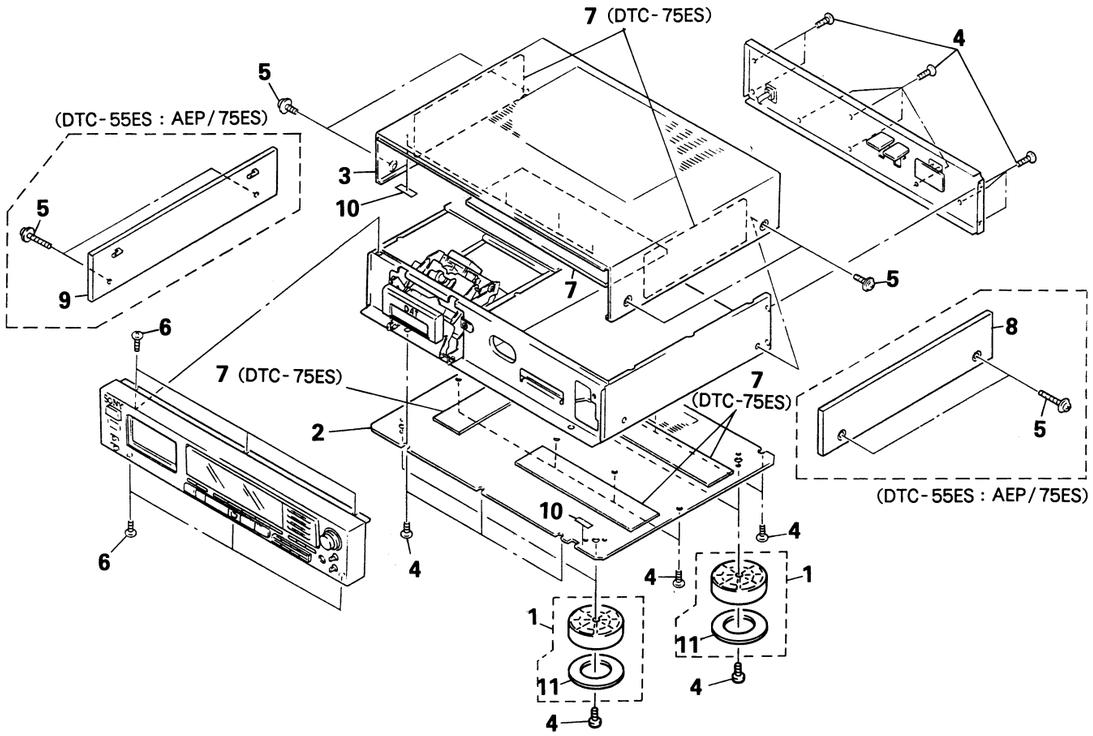
**NOTE:**

- The mechanical parts with no reference number in the exploded views are not supplied.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part number suffix -XX and -X may be different from the parts specified in the components used on the set.
- Color Indication of Appearance Parts
  Example:
  (RED) . . . KNOB, BALANCE (WHITE)
  ↑ ↑
  Cabinet's Color Parts' Color

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifé.

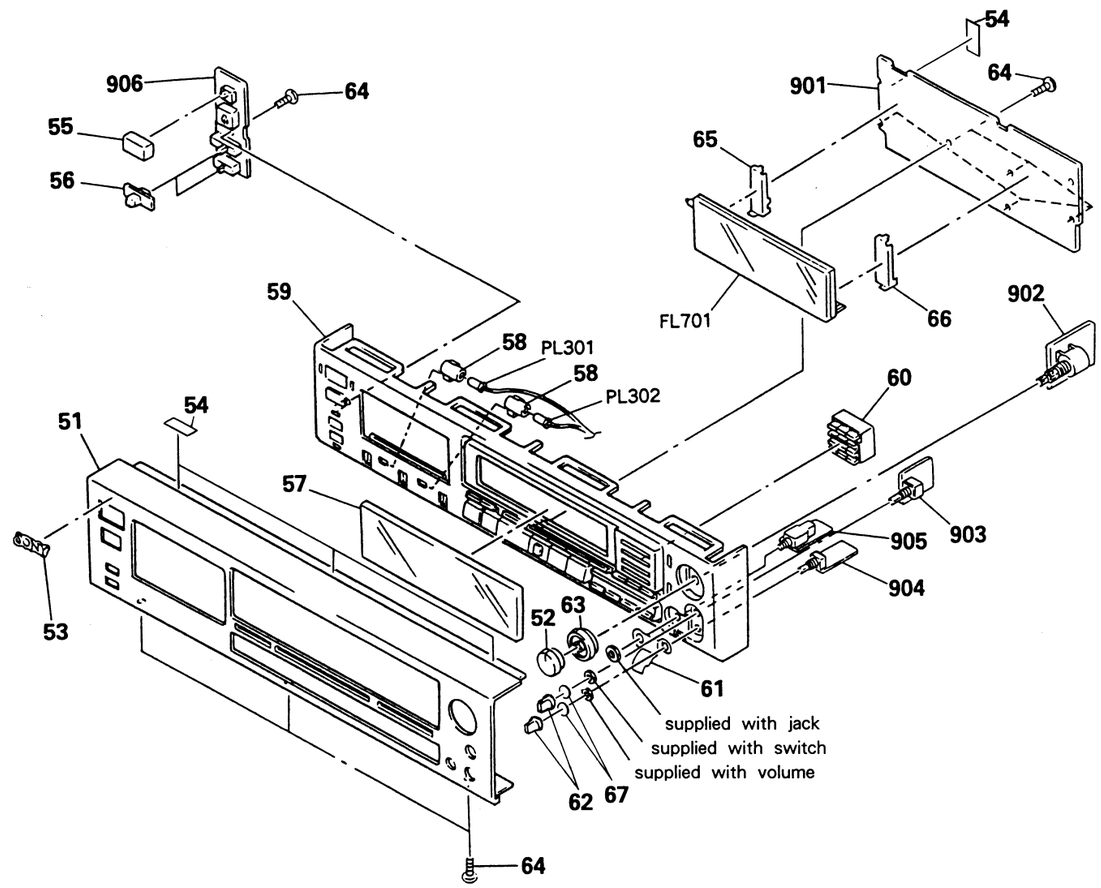
## 5-1. CABINET SECTION




| No. | Part No. | Description | Remarks |
|---|---|---|---|
| 1 | X-3304-938-2 | FOOT ASSY | |
| 2 | *4-931-433-11 | PLATE, BOTTOM | |
| 3 | 3-350-407-41 | CASE | |
| 4 | 7-682-548-09 | SCREW +BVTT 3X8 (S) | |
| 5 | 3-704-366-01 | (55ES:UK/700)....SCREW (CASE) (M3X8) | |
| | 4-933-446-01 | (55ES:AEP/75ES)...SCREW (SIDE PANEL) | |
| 6 | 7-682-547-09 | SCREW +B 3X6 | |
| 7 | *4-936-612-01 | RUBBER (DAMPER) | |
| 8 | *X-4919-028-1 | (55ES:AEP/75ES)...PANEL (R) ASSY, SIDE | |
| 9 | *X-4919-027-1 | (55ES:AEP/75ES)...PANEL (L) ASSY, SIDE | |
| 10 | 3-831-441-XX | CUSHION, SPEAKER | |
| 11 | 4-923-836-11 | CUSHION | |

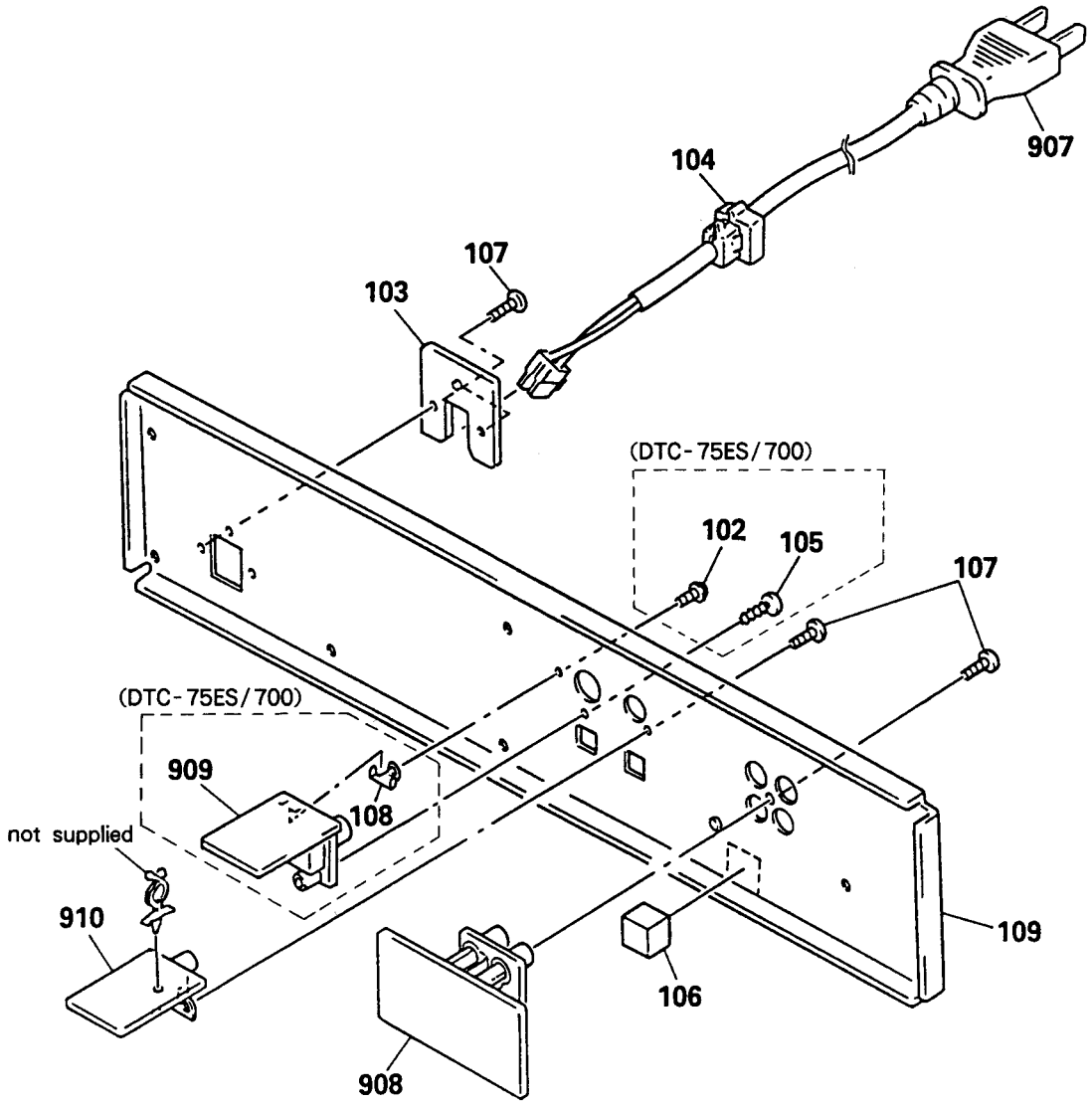


## 5-2. FRONT PANEL SECTION




| No. | Part No. | Description | Remarks |
|---|---|---|---|
| 51 | 4-936-605-11 | (700).....PANEL (FRONT) | |
| | 4-936-605-21 | (55ES:AEP)...PANEL (FRONT) | |
| | 4-936-605-31 | (55ES:UK)....PANEL (FRONT) | |
| | 4-936-605-41 | (75ES).....PANEL (FRONT) | |
| 52 | 3-332-590-01 | KNOB (REC VOL-RIGHT) | |
| 53 | 4-908-848-01 | EMBLEM, SONY | |
| 54 | 3-831-441-XX | CUSHION, SPEAKER | |
| 55 | 4-922-921-01 | BUTTON (POWER) | |
| 56 | 4-931-421-01 | KNOB (T & S) | |
| 57 | 4-931-482-01 | WINDOW (FL TUBE) | |
| 58 | *4-925-758-11 | COVER (L), LAMP | |
| 59 | X-4919-024-1 | ESCUTCHEON (PANEL) ASSY | |
| 60 | 4-923-782-21 | BUTTON (10 KEY) | |
| 61 | 4-931-483-01 | PLATE (HP VOL), GROUND | |
| 62 | 3-354-931-01 | KNOB (DIA.10) | |
| 63 | 3-332-589-01 | KNOB (REC VOL-LEFT) | |
| 64 | 7-685-534-19 | SCREW +BTP 2.6X8 TYPE2 N-S | |
| 65 | *4-922-524-01 | HOLDER (LEFT) | |
| 66 | *4-922-523-01 | HOLDER (RIGHT) | |
| 67 | 3-354-981-01 | SPRING (SUS), RING | |
| 901 | *A-2006-274-A | MOUNTED PCB, CONTROL SW | |
| 902 | *1-633-721-11 | PC BOARD, REC VOL | |
| 903 | *1-633-724-11 | PC BOARD, INPUT SELECT | |
| 904 | *1-633-722-11 | PC BOARD, HEADPHONE VOL | |
| 905 | *1-633-723-11 | PC BOARD, HEADPHONE JACK | |
| 906 | *1-633-725-11 | PC BOARD, POWER SW | |
| FL701 | 1-519-562-11 | INDICATOR TUBE, FLUORESCENT | |
| PL301 | 1-518-664-11 | LAMP, PILOT | |
| PL302 | 1-518-664-11 | LAMP, PILOT | |

## 5-3. BACK PANEL SECTION



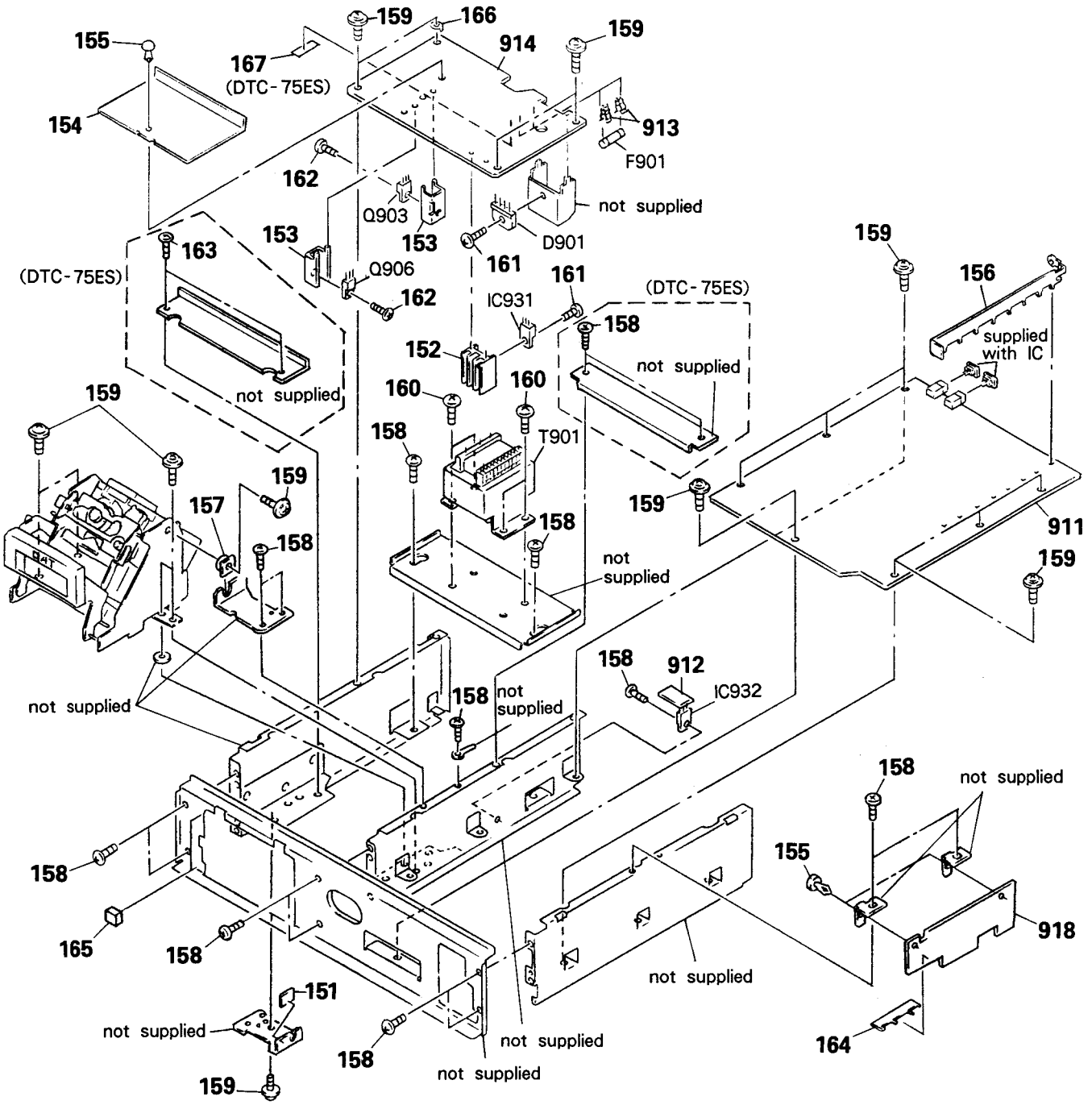

| No. | Part No. | Description | Remarks |
|---|---|---|---|
| 102 | 7-621-771-06 | (75ES/700)...SCREW, LOCK | |
| 103 | *4-923-873-01 | BRACKET, CORD STOPPER | |
| 104 | *3-703-244-00 | (55ES/700)...BUSHING (2104), CORD | |
| | 4-916-783-01 | (75ES).....BUSHING, CORD | |
| 105 | 7-685-646-79 | (75ES/700)...SCREW +BVTP 3X8 TYPE2 N-S | |
| 106 | *4-936-607-01 | BUSHING, RUBBER | |
| 107 | 7-682-548-09 | SCREW +BVTT 3X8 (S) | |
| 108 | *4-916-318-01 | (75ES/700)...PLATE, GROUND | |

| No. | Part No. | Description | Remarks |
|---|---|---|---|
| 109 | *4-931-498-11 | (700).....PANEL, BACK | |
| | *4-931-498-22 | (55ES:AEP)...PANEL, BACK | |
| | *4-931-498-32 | (55ES:UK)....PANEL, BACK | |
| | *4-931-498-41 | (75ES).....PANEL, BACK | |
| 907 | ⚠1-559-479-11 | (75ES).....CORD, POWER | |
| | ⚠1-575-695-11 | (700).....CORD, POWER | |
| | ⚠1-575-912-11 | (55ES:AEP)...CORD, POWER | |
| | ⚠1-575-913-11 | (55ES:UK)....CORD, POWER | |
| 908 | *1-633-719-11 | PC BOARD, PIN JACK | |
| 909 | *1-633-718-11 | (75ES/700)...PC BOARD, DIGITAL OUT | |
| 910 | *1-633-717-11 | PC BOARD, DIGITAL IN | |

**Note:**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

**Note:**
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

## 5-4. CHASSIS SECTION



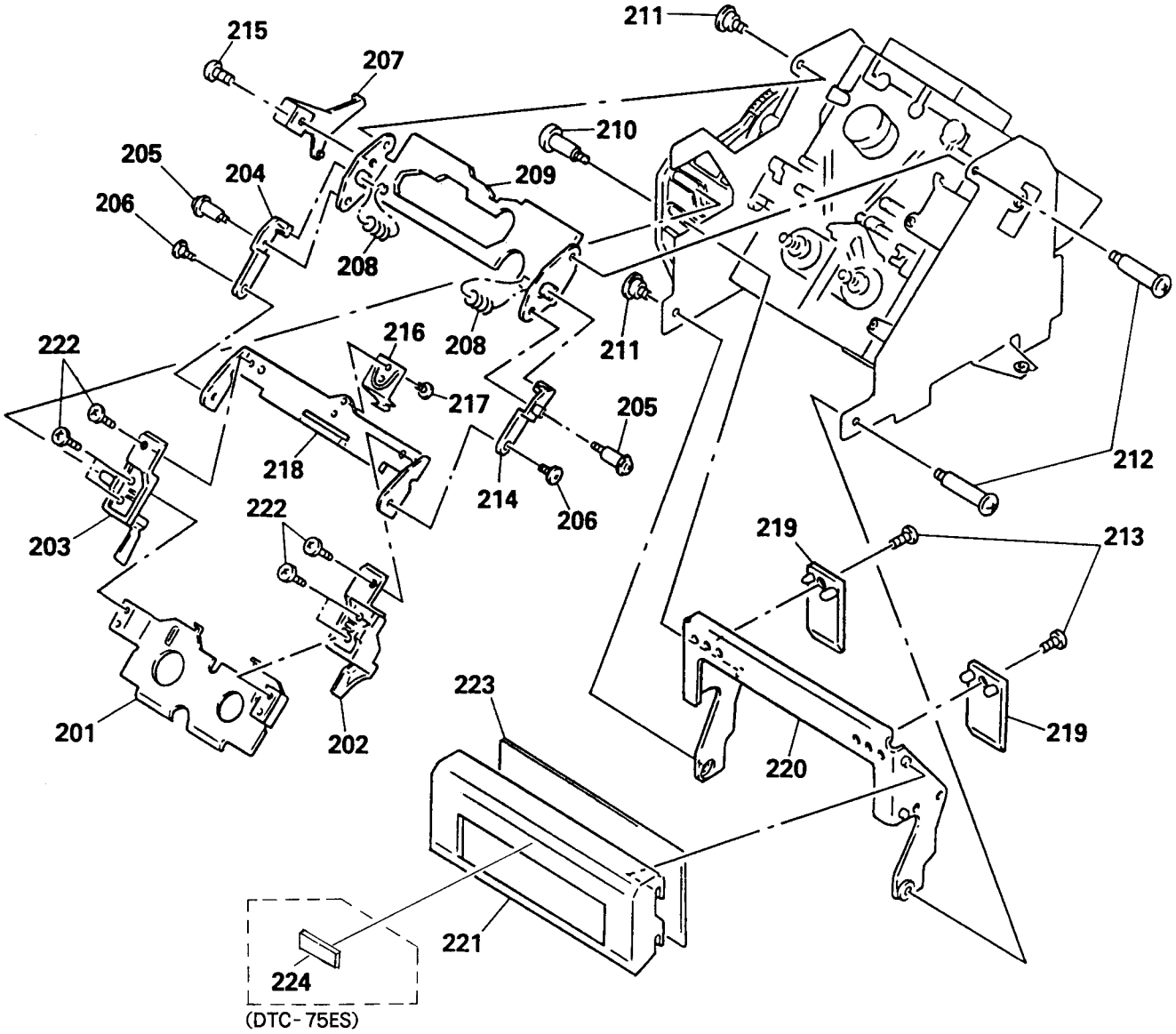

| No. | Part No. | Description | Remarks |
|---|---|---|---|
| 151 | 2-272-609-00 | SPACER | |
| 152 | *4-363-146-71 | HEAT SINK, V.OUT | |
| 153 | 4-902-345-01 | HEAT SINK | |
| 154 | *4-931-491-01 | COVER (POWER) | |
| 155 | 3-531-576-01 | RIVET | |
| 156 | *4-931-489-01 | PLATE (BUS BAR), GROUND | |
| 157 | 4-931-466-01 | SPACER | |
| 158 | 7-682-548-09 | SCREW +BVTT 3X8 (S) | |
| 159 | 4-886-821-11 | SCREW, S TIGHT, +PTTWH 3X6 | |
| 160 | 7-682-560-04 | SCREW +BVTT 4X6 (S) | |
| 161 | 7-682-548-09 | SCREW +B 3X8 | |
| 162 | 7-682-147-15 | SCREW, TR | |
| 163 | 7-682-545-09 | (75ES)...SCREW +P 3X4 | |
| 164 | *3-311-617-11 | REINFORCEMENT, PCB | |
| 165 | 9-911-842-XX | CUSHION, PC BOARD | |
| 166 | 4-870-539-00 | PLATE, GROUND | |
| 167 | 3-701-947-15 | (55ES)...LABEL (T2.5A), FUSE | |
| 911 | *A-2006-291-A | (700)....MOUNTED PCB, MAIN | |
| | *A-2006-292-A | (75ES)...MOUNTED PCB, MAIN | |
| | *A-2006-303-A | (55ES)...MOUNTED PCB, MAIN | |

| No. | Part No. | Description | Remarks |
|---|---|---|---|
| 912 | *1-633-814-11 | PC BOARD, TRANSISTER | |
| 913 | *1-533-213-31 | HOLDER, FUSE | |
| 914 | *A-2006-244-A | (55ES:AEP)...MOUNTED PCB, POWER | |
| | *A-2006-293-A | (75ES/700)...MOUNTED PCB, POWER | |
| | *A-2006-296-A | (55ES:UK)....MOUNTED PCB, POWER | |
| 918 | *1-635-440-11 | PC BOARD, A/D | |
| D901 | 8-719-311-72 | DIODE RBV-406H-01 | |
| F901 | ⚠.1-532-286-00 | (55ES).....FUSE, TIME-LAG (2.5A) | |
| F901 | ⚠.1-532-744-11 | (75ES/700)...FUSE, GLASS TUBE (2.5A) | |
| IC931 | 8-759-148-79 | IC UPC2406HF | |
| IC932 | 8-759-634-55 | IC M5F7805L-720 | |
| Q903 | 8-729-127-53 | TRANSISTOR 2SC2275-P | |
| Q906 | 8-729-190-53 | TRANSISTOR 2SA985A | |
| T901 | ⚠.1-450-080-11 | (75ES/700)...TRANSFORMER, POWER | |
| T901 | ⚠.1-450-164-11 | (55ES).....TRANSFORMER, POWER | |

**Note:**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

**Note:**
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

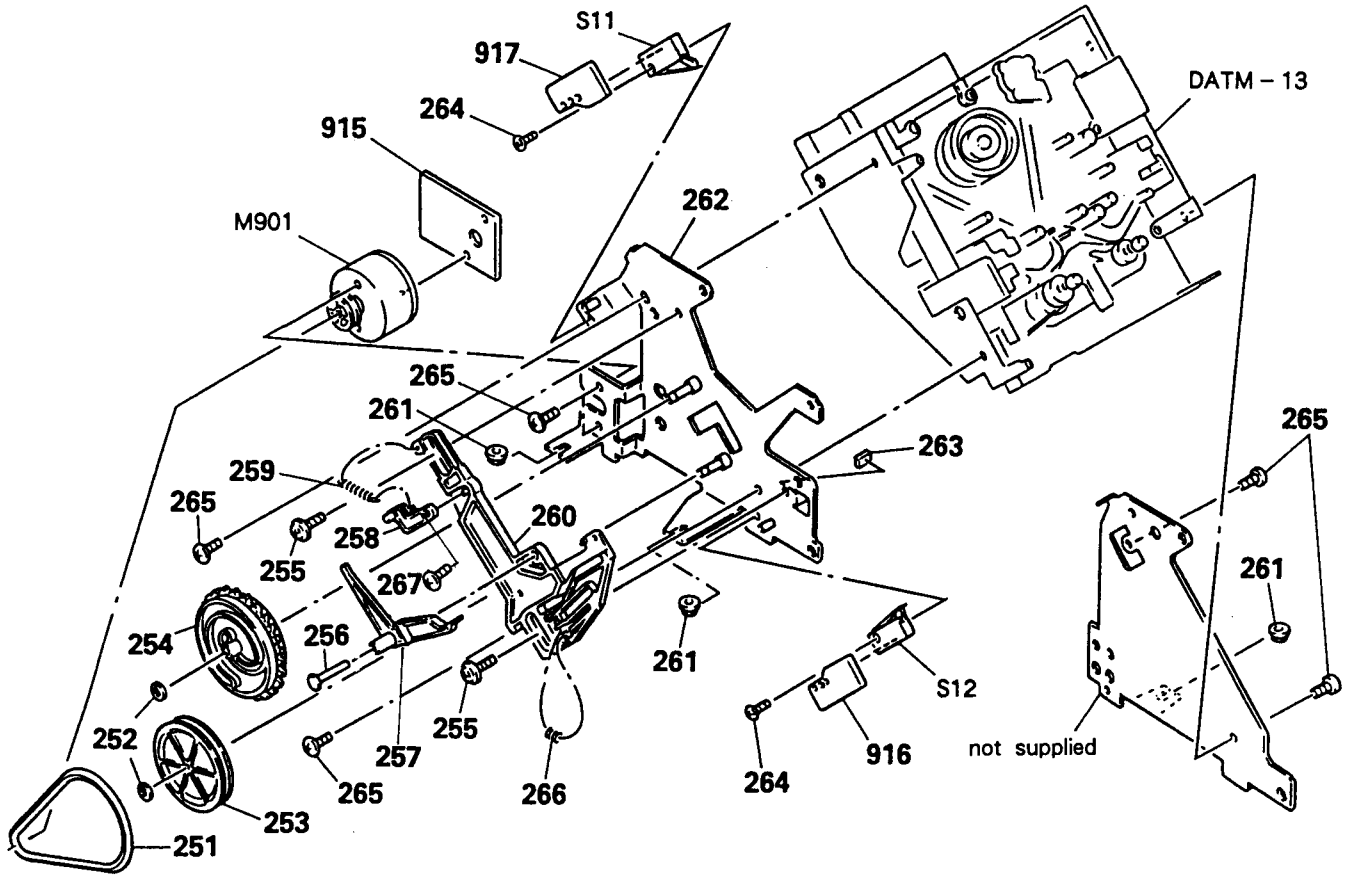
## 5-5. MECHANISM SECTION 1




| No. | Part No. | Description | Remarks |
|---|---|---|---|
| 201 | 4-931-476-01 | HOLDER (LOWER) | |
| 202 | 4-931-486-01 | HOLDER (C-RIGHT) | |
| 203 | 4-931-484-01 | HOLDER (C-LEFT) | |
| 204 | 4-931-473-01 | ARM (LIMITER R) | |
| 205 | 4-918-991-01 | SCREW, STEP | |
| 206 | 3-312-161-00 | SCREW, STEP, PRECISION | |
| 207 | *X-4919-020-1 | JOINT ASSY | |
| 208 | 3-537-214-00 | SPRING, COMPRESSION | |
| 209 | *4-931-475-01 | PLATE, FULCRUM | |
| 210 | 4-931-471-01 | SCREW (STEP) | |
| 211 | 2-236-956-00 | SCREW, STEP | |
| 212 | 4-931-463-01 | SCREW (STEP) | |
| 213 | 7-621-772-08 | SCREW +B 2X3 | |

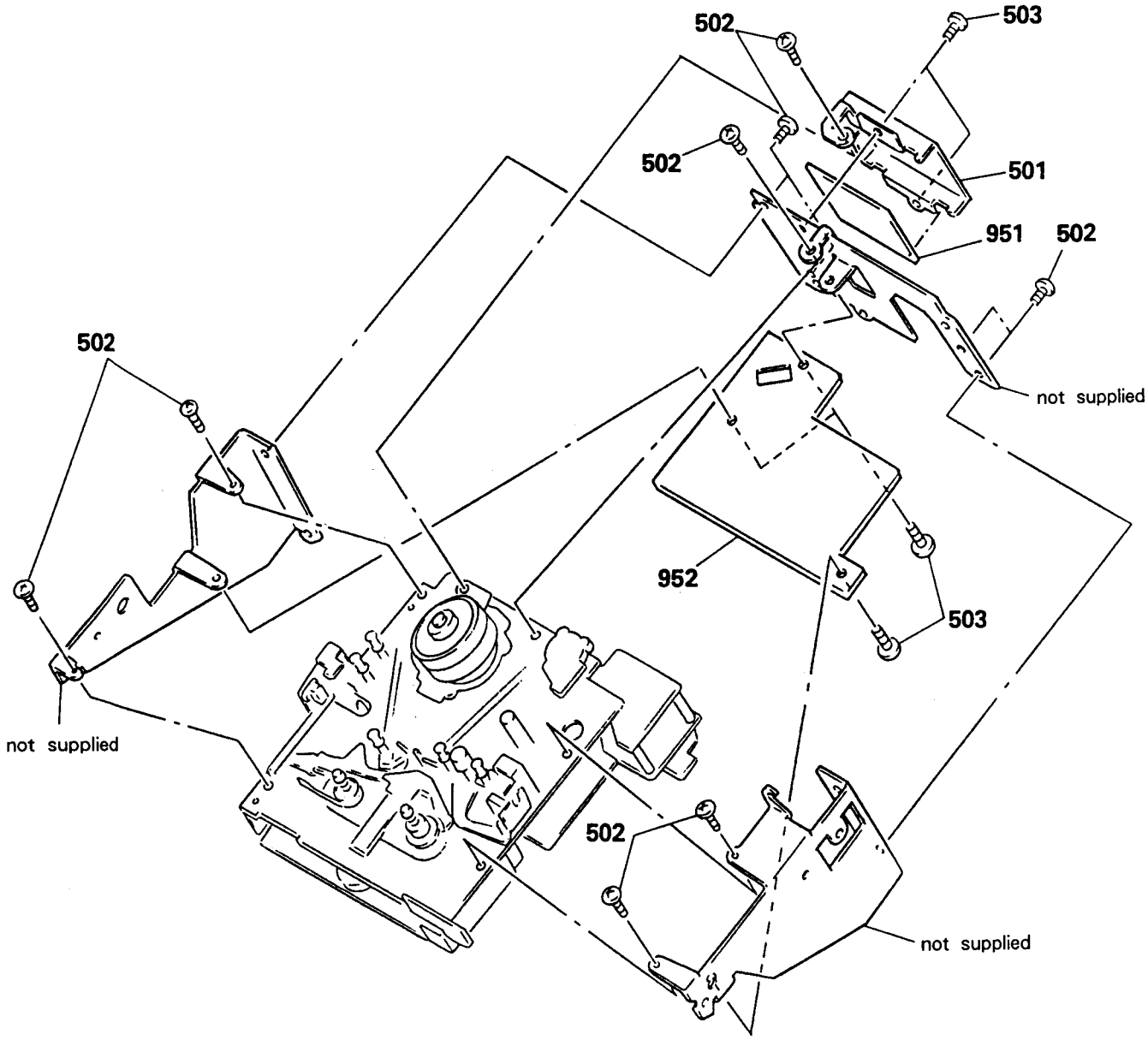
| No. | Part No. | Description | Remarks |
|---|---|---|---|
| 214 | 4-931-481-01 | ARM (LIMITER L) | |
| 215 | 7-682-545-09 | SCREW +B 3X4 | |
| 216 | 4-931-461-01 | SPRING (CENTER), LEAF | |
| 217 | 3-352-517-01 | SCREW (M2X2.5) | |
| 218 | *4-931-485-01 | HOLDER (C-INNER) | |
| 219 | 4-931-469-01 | PLATE, ORNAMENTAL | |
| 220 | 4-931-474-01 | HOLDER (WINDOW) | |
| 221 | 4-931-480-01 | (700)....LID, CASSETTE | |
| | 4-931-480-11 | (75ES)...LID, CASSETTE | |
| 222 | 7-621-772-10 | SCREW +B 2X4 | |
| 223 | 4-931-462-01 | WINDOW | |
| 224 | 4-936-615-01 | (75ES)...PLATE (DAT LOGO), ORNAMENTAL | |

## 5-6. MECHANISM SECTION 2



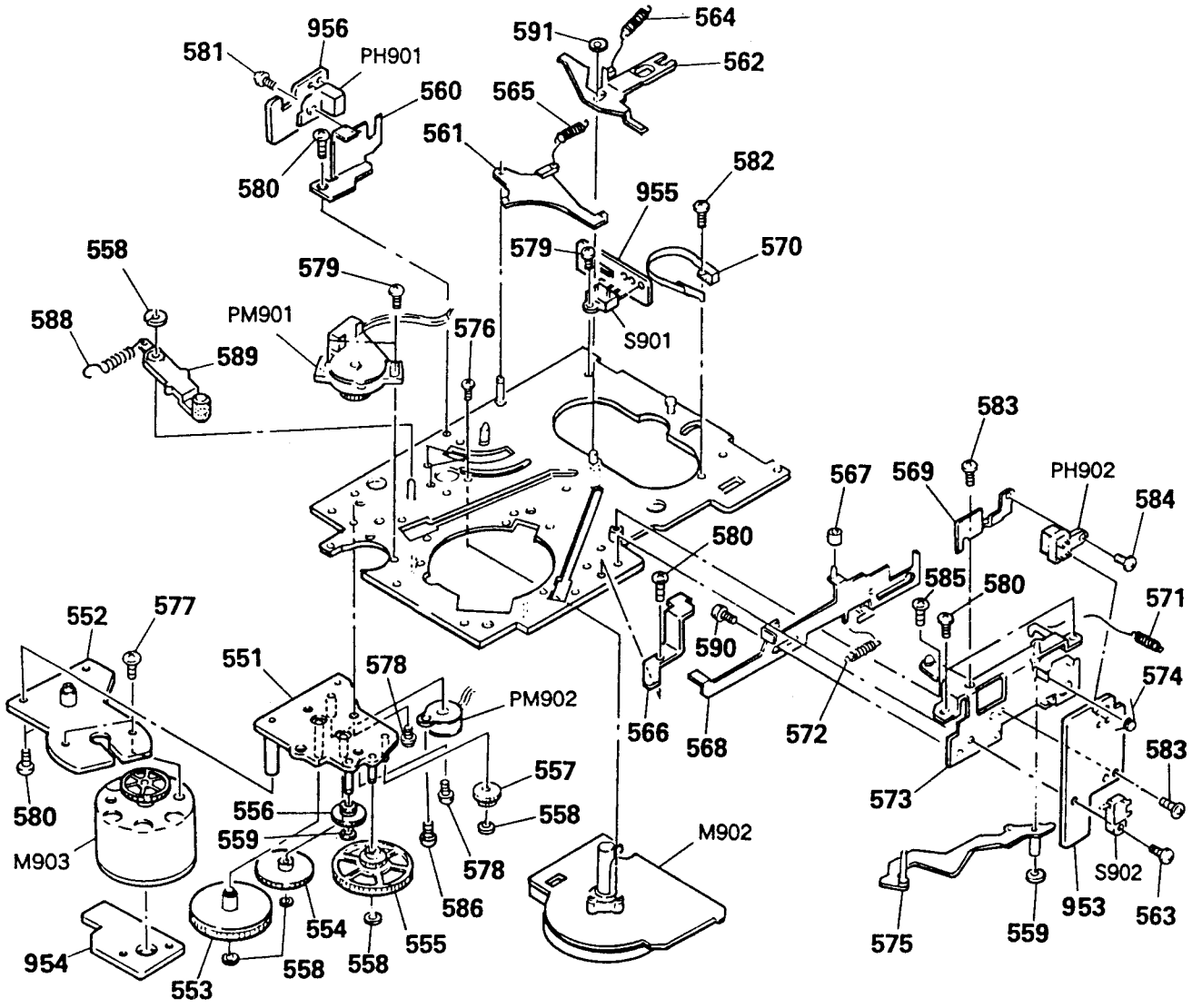

| No. | Part No. | Description | Remarks |
|---|---|---|---|
| 251 | 4-931-470-01 | BELT (DRIVING) | |
| 252 | 3-307-948-21 | WASHER, NYLON | |
| 253 | 4-931-459-01 | PULLEY | |
| 254 | 4-931-477-01 | GEAR (CAM) | |
| 255 | 4-932-336-01 | SCREW (STEP) | |
| 256 | 4-931-468-01 | SHAFT (PRESS FITTING) | |
| 257 | 4-931-490-01 | LEVER (LINK) | |
| 258 | 4-931-460-01 | ARM (SLIDER) | |
| 259 | 3-549-810-00 | SPRING, TENSION | |
| 260 | 4-931-492-01 | SLIDER (CAM) | |
| 261 | 4-931-466-01 | SPACER | |
| 262 | *X-4919-023-1 | PLATE ASSY, SIDE | |
| 263 | 9-911-863-XX | SPACER | |
| 264 | 7-621-255-45 | SCREW +P 2X6 | |
| 265 | 7-621-775-08 | SCREW +B 2.6X3 | |
| 266 | 3-537-215-00 | SPRING, COMPRESSION | |
| 267 | 4-936-626-01 | SHAFT (ARM PRESS FITTING) | |
| 915 | *1-633-726-11 | PC BOARD, CASSETTE COMPARTMENT MOTOR | |
| 916 | *1-633-727-11 | PC BOARD, CASSETTE COMPARTMENT IN | |
| 917 | *1-633-728-11 | PC BOARD, CASSETTE COMPARTMENT OUT | |
| M901 | A-2003-448-A | MOTOR ASSY (CASSETTE COMPARTMENT) | |
| S11 | 1-570-975-11 | SWITCH, SLIDE (CASSETTE TABLE IN) | |
| S12 | 1-572-247-11 | SWITCH, SLIDE (CASSETTE TABLE OUT) | |

## 5-7. MECHANISM SECTION 3 (DATM-13)




| No. | Part No. | Description | Remarks |
|---|---|---|---|
| 501 | *3-352-522-01 | CASE, SHIELD | |
| 502 | 7-621-775-08 | SCREW +B 2.6X3 | |
| 503 | 7-621-775-10 | SCREW +B 2.6X4 | |
| 951 | *A-2006-139-A | MOUNTED PCB, RF AMPLIFIER | |
| 952 | *A-2006-140-A | MOUNTED PCB, DRUM DRIVE | |

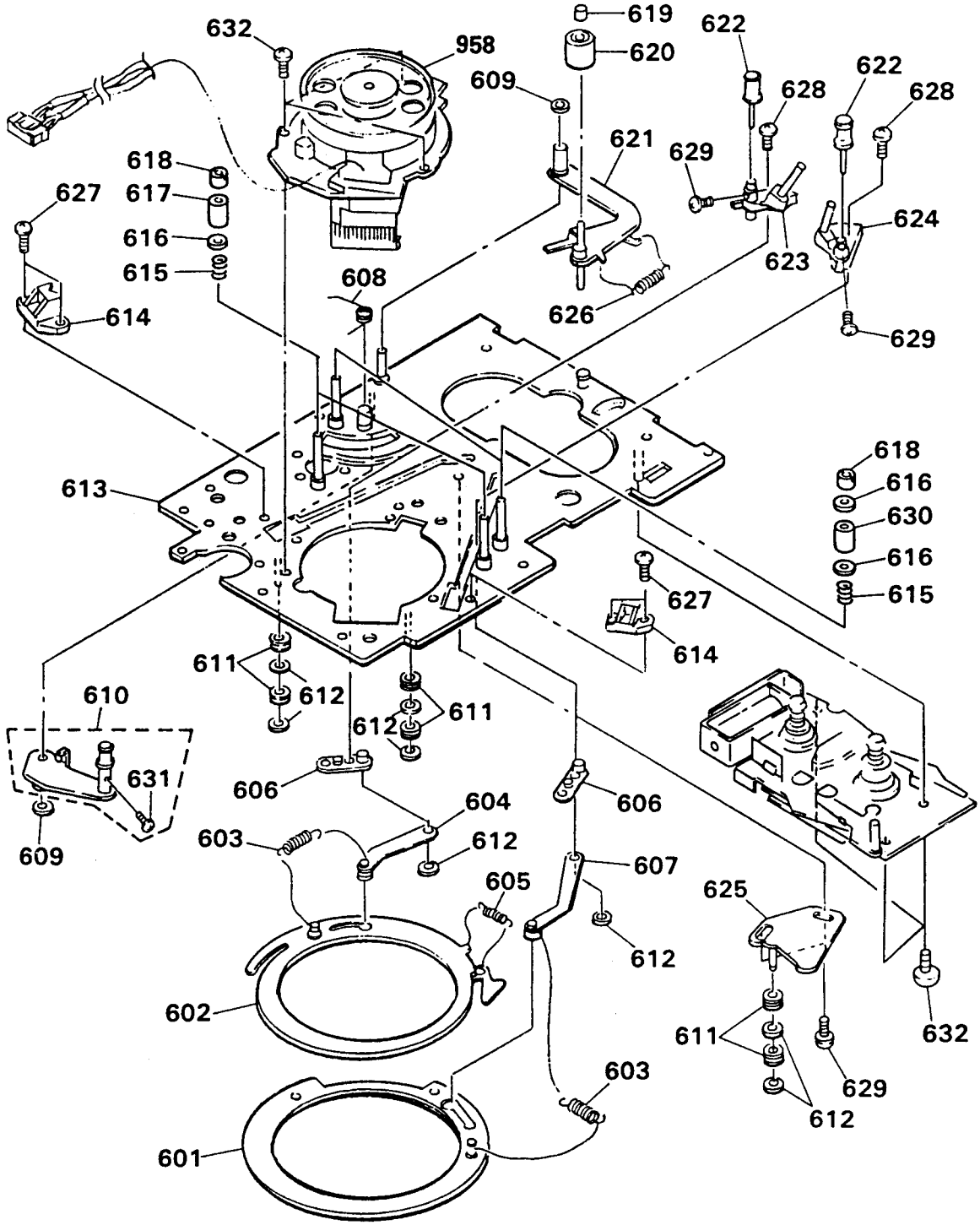
## 5-8. MECHANISM SECTION 4 (DATM-13)




| No. | Part No. | Description | Remarks |
|---|---|---|---|
| 551 | *X-3337-656-1 | CHASSIS (DECELERATION GEAR) ASSY | |
| 552 | *X-3337-659-1 | BRACKET (MOTOR) ASSY | |
| 553 | X-3337-630-3 | GEAR (B) ASSY | |
| 554 | 3-345-129-01 | GEAR (A) | |
| 555 | 3-345-181-01 | GEAR (LOADING A) | |
| 556 | 3-337-669-01 | GEAR, MIDWAY | |
| 557 | 3-345-182-01 | GEAR (LOADING B) | |
| 558 | 3-701-436-11 | WASHER, 1.6 POLYETHYLENE | |
| 559 | 3-559-408-11 | WASHER, POLYETHYLENE, DIA.1.2 | |
| 560 | *3-352-507-01 | HOLDER (R) | |
| 561 | 3-345-145-01 | LEVER (T LOCK) | |
| 562 | X-3337-638-1 | LEVER (SLIDER) ASSY | |
| 563 | 7-621-772-38 | SCREW +B 2X6 | |
| 564 | 3-570-898-00 | SPRING, TENSION | |
| 565 | 3-547-661-00 | SPRING, TENSION | |
| 566 | *3-352-506-01 | HOLDER (L) | |
| 567 | 3-352-525-01 | ROLLER (TENSION REGULATOR) | |
| 568 | X-3337-618-1 | SLIDER ASSY, MODE | |
| 569 | *3-352-515-01 | HOLDER (E SENSOR L) | |
| 570 | X-3337-632-1 | BAND (TENSION REGULATOR) ASSY | |
| 571 | 3-352-527-01 | SPRING, TENSION | |
| 572 | 3-570-892-00 | SPRING, TENSION | |
| 573 | *X-3337-657-1 | CHASSIS (TENSION REGULATOR) ASSY | |
| 574 | 3-337-673-01 | SPRING | |
| 575 | *X-3337-654-1 | LEVER (TENSION REGULATOR) ASSY | |
| 576 | 7-627-552-47 | SCREW, PRECISION +P 1.7X4 | |

| No. | Part No. | Description | Remarks |
|---|---|---|---|
| 577 | 7-621-775-00 | SCREW +B 2.6X3 | |
| 578 | 7-628-253-00 | SCREW +PS 2X4 | |
| 579 | 7-621-772-18 | SCREW +B 2X4 | |
| 580 | 7-621-772-08 | SCREW +B 2X3 | |
| 581 | 7-621-772-20 | SCREW +B 2X5 | |
| 582 | 7-627-852-27 | +P 1.7X3 | |
| 583 | 7-627-552-18 | SCREW, PRECISION +P 1.7X1.6 | |
| 584 | 3-884-232-00 | SCREW M 1.7X2.5 | |
| 585 | 3-352-517-01 | SCREW (M2X2.5) | |
| 586 | 7-621-255-10 | SCREW +P 2X3 | |
| 588 | 3-307-377-00 | SPRING, TENSION | |
| 589 | A-2003-438-A | CLEANER ASSY, HEAD | |
| 590 | 3-703-502-11 | SCREW | |
| 591 | 3-321-813-01 | WASHER, COTTER POLYETHYLENE | |
| 953 | *1-633-711-11 | PC BOARD, END SENSOR (S) | |
| 954 | *1-633-713-11 | PC BOARD, CONTROL MOTOR | |
| 955 | *1-633-710-11 | PC BOARD, RECOGUNITION | |
| 956 | *1-633-712-11 | PC BOARD, END SENSOR (T) | |
| M902 | 8-835-306-01 | MOTOR, DC U-17A (CAPSTAN) | |
| M903 | A-2003-545-A | MOTOR ASSY (CONTROL) | |
| PH901 | 1-808-957-11 | PHOTO SENSOR (END T) | |
| PH902 | 1-808-957-11 | PHOTO SENSOR (END S) | |
| PM901 | 1-464-724-31 | ENCODER, ROTARY | |
| PM902 | 1-454-462-21 | SOLENOID, PLUNGER (LOADING) | |
| S901 | 1-571-878-11 | SWITCH, PUSH(2 KEY)(CASSETTE IN/REC PROOF) | |
| S902 | 1-570-771-21 | SWITCH (LIMIT) | |

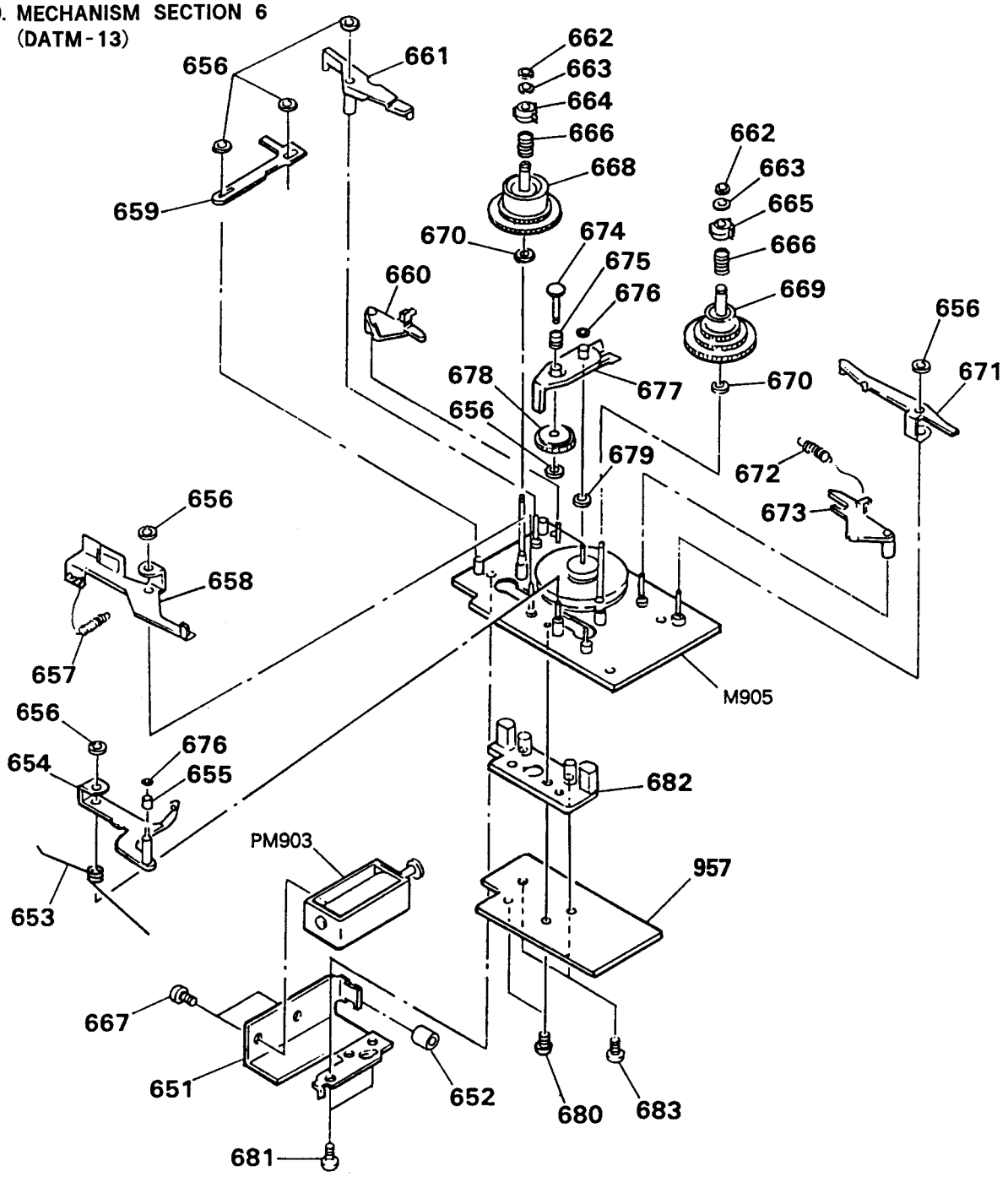
## 5-9. MECHANISM SECTION 5 (DATM-13)




| No. | Part No. | Description | Remarks |
|---|---|---|---|
| 601 | X-3337-602-1 | RING (LEFT) ASSY, LOADING | |
| 602 | X-3337-601-1 | RING (RIGHT) ASSY, LOADING | |
| 603 | 3-337-653-01 | SPRING, TENSION | |
| 604 | *X-3337-603-1 | ARM (RIGHT) ASSY, LOADING | |
| 605 | 3-352-503-01 | SPRING, TENSION | |
| 606 | X-3337-604-1 | PLATE ASSY, LOADING | |
| 607 | *X-3337-607-1 | ARM (LEFT) ASSY, LOADING | |
| 608 | 3-352-513-01 | SPRING (F GUIDE RETURN) | |
| 609 | 3-701-436-11 | WASHER, 1.6 POLYETHYLENE | |
| 610 | A-2003-408-A | LEVER (F ARM) ASSY | |
| 611 | 3-337-622-01 | ROLLER, RING | |
| 612 | 3-559-408-11 | WASHER, POLYETHYLENE, DIA.1.2 | |
| 613 | *X-3337-658-1 | CHASSIS (MECHANICAL) ASSY | |
| 614 | *3-345-195-01 | CATCHER | |
| 615 | 3-573-470-00 | SPRING, COMPRESSION | |
| 616 | 3-337-677-01 | FLANGE | |
| 617 | 3-337-676-11 | GUIDE, FIXED | |

| No. | Part No. | Description | Remarks |
|---|---|---|---|
| 618 | 3-337-605-01 | NUT, ADJUSTMENT | |
| 619 | 3-337-626-01 | CAP, PINCH ROLLER | |
| 620 | X-3337-610-1 | PINCH ROLLER ASSY | |
| 621 | X-3337-660-1 | ARM (PINCH ROLLER) ASSY | |
| 622 | X-3337-622-1 | GUIDE (POM) ASSY, ROLLER | |
| 623 | X-3337-652-1 | SLANT BLOCK (RIGHT) ASSY | |
| 624 | X-3337-651-1 | SLANT BLOCK (LEFT) ASSY | |
| 625 | *X-3337-605-1 | ARM ASSY, RING ROLLER | |
| 626 | 3-547-659-00 | SPRING, TENSION | |
| 627 | 7-627-852-17 | +P 1.7X4 | |
| 628 | 3-703-502-81 | SCREW | |
| 629 | 7-627-551-17 | SCREW, PRECISION +P 1.4X2 | |
| 630 | 3-337-676-01 | GUIDE, FIXED | |
| 631 | 7-627-551-27 | SCREW, PRECISION +P 1.4X2.5 | |
| 632 | 7-621-772-18 | SCREW +B 2X4 | |
| 958 | 8-848-513-11 | DRUM ASSY DOU-02D | |

## 5-10. MECHANISM SECTION 6 (DATM-13)




| No. | Part No. | Description | Remarks |
|---|---|---|---|
| 651 | *3-345-118-01 | BRACKET (SOLENOID) | |
| 652 | *3-576-990-01 | CUSHION | |
| 653 | 3-345-169-01 | SPRING, TORSION | |
| 654 | *X-3337-628-1 | LEVER ASSY | |
| 655 | 3-345-104-01 | COLLAR | |
| 656 | 3-559-408-11 | WASHER, POLYETHYLENE, DIA.1.2 | |
| 657 | 3-345-168-01 | SPRING, TENSION | |
| 658 | *X-3337-640-1 | LEVER (REVERSE SB) ASSY | |
| 659 | *3-345-166-01 | LEVER (SOLENOID) | |
| 660 | X-3337-635-1 | LEVER (BRAKE T) ASSY | |
| 661 | 3-345-110-01 | LEVER (BRAKE ARM) | |
| 662 | 3-578-224-00 | WASHER | |
| 663 | 3-345-112-01 | RING, RETAINING | |
| 664 | *2-623-736-01 | CLAW (C) (LEFT), REEL | |
| 665 | *2-623-752-01 | CLAW (C) (RIGHT), REEL | |
| 666 | 2-623-754-01 | SPRING, COMPRESSION | |
| 667 | 7-621-775-00 | SCREW +B 2.6X3 | |
| 668 | X-3337-634-1 | TABLE (S) ASSY, REEL | |

| No. | Part No. | Description | Remarks |
|---|---|---|---|
| 669 | X-3337-642-1 | TABLE (T) ASSY, REEL | |
| 670 | 3-701-438-11 | WASHER, 2.5 | |
| 671 | *X-3337-637-1 | LEVER (BRAKE RELEASE) ASSY | |
| 672 | 3-527-190-00 | SPRING, TENSION | |
| 673 | X-3337-636-1 | LEVER (BRAKE S) ASSY | |
| 674 | *3-345-114-01 | SHAFT (MIDWAY GEAR) | |
| 675 | 3-345-115-01 | SPRING, COMPRESSION | |
| 676 | 3-315-384-11 | WASHER, STOPPER | |
| 677 | 3-345-113-01 | LEVER (FR) | |
| 678 | X-3337-633-1 | GEAR (MIDWAY) ASSY | |
| 679 | 3-701-436-11 | WASHER, 1.6 POLYETHYLENE | |
| 680 | 7-621-772-18 | SCREW +B 2X4 | |
| 681 | 7-621-772-08 | SCREW +B 2X3 | |
| 682 | *3-345-142-01 | HOLDER (FG SENSOR) | |
| 683 | 7-685-102-19 | SCREW +P 2X4 TYPE2 SLIT | |
| 957 | *1-633-709-11 | PC BOARD, REEL FG | |
| M905 | 8-835-346-11 | MOTOR, DC U-16B (REEL) | |
| PM903 | 1-454-482-21 | SOLENOID, PLUNGER (REEL MOTOR CONTROL) | |

# SECTION 6
# ELECTRICAL PARTS LIST

**NOTE:**

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:
MF: μF, PF: μμF.

RESISTORS
- All resistors are in ohms.
- F: nonflammable

COILS
- MMH: mH, UH: μH

SEMICONDUCTORS
In each case, U: μ, for example:
UA...: μA..., UPA...: μPA..., UPC...: μPC, UPD...: μPD...

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

| Ref.No. | Part No. | Description |
|---|---|---|
| 901 | *A-2006-274-A | MOUNTED PCB, CONTROL SW |
| 902 | *1-633-721-11 | PC BOARD, REC VOL |
| 903 | *1-633-724-11 | PC BOARD, INPUT SELECT |
| 904 | *1-633-722-11 | PC BOARD, HEADPHONE VOL |
| 905 | *1-633-723-11 | PC BOARD, HEADPHONE JACK |
| 906 | *1-633-725-11 | PC BOARD, POWER SW |
| 907 | ⚠1-559-479-11 | (75ES).....CORD, POWER |
| | ⚠1-575-695-11 | (700).....CORD, POWER |
| | ⚠1-575-912-11 | (55ES:AEP)...CORD, POWER |
| | ⚠1-575-913-11 | (55ES:UK)....CORD, POWER |
| 908 | *1-633-719-11 | PC BOARD, PIN JACK |
| 909 | *1-633-718-11 | (75ES/700)...PC BOARD, DIGITAL OUT |
| 910 | *1-633-717-11 | PC BOARD, DIGITAL IN |
| 911 | *A-2006-291-A | (700)....MOUNTED PCB, MAIN |
| | *A-2006-292-A | (75ES)...MOUNTED PCB, MAIN |
| | *A-2006-303-A | (55ES)...MOUNTED PCB, MAIN |
| 912 | *1-633-814-11 | PC BOARD, TRANSISTER |
| 913 | *1-533-213-31 | HOLDER, FUSE |
| 914 | *A-2006-244-A | (55ES:AEP)...MOUNTED PCB, POWER |
| | *A-2006-293-A | (75ES/700)...MOUNTED PCB, POWER |
| | *A-2006-296-A | (55ES:UK)....MOUNTED PCB, POWER |
| 915 | *1-633-726-11 | PC BOARD, CASSETTE COMPARTMENT MOTOR |
| 916 | *1-633-727-11 | PC BOARD, CASSETTE COMPARTMENT IN |
| 917 | *1-633-728-11 | PC BOARD, CASSETTE COMPARTMENT OUT |
| 918 | *1-635-440-11 | PC BOARD, A/D |
| 951 | *A-2006-139-A | MOUNTED PCB, RF AMPLIFIER |
| 952 | *A-2006-140-A | MOUNTED PCB, DRUM DRIVE |
| 953 | *1-633-711-11 | PC BOARD, END SENSOR (S) |
| 954 | *1-633-713-11 | PC BOARD, CONTROL MOTOR |
| 955 | *1-633-710-11 | PC BOARD, RECOGUNITION |
| 956 | *1-633-712-11 | PC BOARD, END SENSOR (T) |
| 957 | *1-633-709-11 | PC BOARD, REEL FG |
| 958 | 8-848-513-11 | DRUM ASSY DOU-02D |
| C01 | 1-162-851-11 | CERAMIC 0.1MF 16V |
| C02 | 1-163-038-00 | CERAMIC CHIP 0.1MF 25V |
| C101 | 1-136-439-11 | FILM 330PF 5% 630V |
| C101A | 1-124-925-11 | ELECT 2.2MF 20% 50V |
| C102 | 1-136-253-11 | FILM 0.0018MF 3% 100V |
| C102A | 1-123-875-11 | ELECT 10MF 20% 50V |
| C103 | 1-136-433-11 | FILM 100PF 5% 630V |
| C103A | 1-164-161-11 | CERAMIC CHIP 0.0022MF 10% 50V |
| C104 | 1-136-253-11 | FILM 0.0018MF 3% 100V |
| C104A | 1-163-017-00 | CERAMIC CHIP 0.0047MF 10% 50V |
| C105 | 1-136-433-11 | FILM 100PF 5% 630V |
| C105A | 1-164-161-11 | CERAMIC CHIP 0.0022MF 10% 50V |
| C106 | 1-136-433-11 | FILM 100PF 5% 630V |
| C106A | 1-124-446-11 | ELECT 47MF 20% 10V |
| C107 | 1-136-433-11 | FILM 100PF 5% 630V |
| C108 | 1-136-233-11 | FILM 0.0047MF 3% 100V |
| C109 | 1-136-228-11 | FILM 0.0012MF 3% 100V |
| C110 | 1-126-062-11 | ELECT 47MF 20% 63V |
| C111 | 1-126-059-11 | ELECT 10MF 20% 63V |
| C120 | 1-126-062-11 | ELECT 47MF 20% 63V |
| C121 | 1-126-062-11 | ELECT 47MF 20% 63V |
| C122 | 1-136-153-00 | FILM 0.01MF 5% 50V |
| C163 | 1-162-290-31 | CERAMIC 470PF 10% 50V |
| C173 | 1-162-290-31 | CERAMIC 470PF 10% 50V |
| C181 | 1-162-279-31 | (75ES/700)...CERAMIC 75PF 10% 50V |
| C182 | 1-162-179-11 | (75ES/700)...CERAMIC 0.1MF 50V |
| C201 | 1-136-439-11 | FILM 330PF 5% 630V |
| C202 | 1-136-253-11 | FILM 0.0018MF 3% 100V |
| C203 | 1-136-433-11 | FILM 100PF 5% 630V |
| C204 | 1-136-253-11 | FILM 0.0018MF 3% 100V |
| C205 | 1-136-433-11 | FILM 100PF 5% 630V |
| C206 | 1-136-433-11 | FILM 100PF 5% 630V |
| C207 | 1-136-433-11 | FILM 100PF 5% 630V |
| C208 | 1-136-233-11 | FILM 0.0047MF 3% 100V |
| C209 | 1-136-228-11 | FILM 0.0012MF 3% 100V |
| C210 | 1-126-062-11 | ELECT 47MF 20% 63V |
| C211 | 1-126-059-11 | ELECT 10MF 20% 63V |
| C220 | 1-126-062-11 | ELECT 47MF 20% 63V |
| C221 | 1-126-062-11 | ELECT 47MF 20% 63V |
| C222 | 1-136-153-00 | FILM 0.01MF 5% 50V |
| C302 | 1-130-834-00 | FILM 1MF 10% 63V |
| C303 | 1-162-211-31 | CERAMIC 33PF 5% 50V |
| C304 | 1-136-165-00 | FILM 0.1MF 5% 50V |
| C305 | 1-136-165-00 | FILM 0.1MF 5% 50V |
| C306 | 1-136-153-00 | FILM 0.01MF 5% 50V |
| C308 | 1-136-157-00 | (75ES/700)...FILM 0.022MF 5% 50V |
| C309 | 1-124-482-11 | (75ES/700)...ELECT 33MF 20% 25V |
| C310 | 1-162-294-31 | CERAMIC 0.001MF 10% 50V |
| C311 | 1-162-199-31 | CERAMIC 10PF 5% 50V |
| C312 | 1-162-199-31 | CERAMIC 10PF 5% 50V |
| C313 | 1-162-201-31 | CERAMIC 12PF 5% 50V |
| C314 | 1-162-201-31 | CERAMIC 12PF 5% 50V |
| C315 | 1-162-294-31 | CERAMIC 0.001MF 10% 50V |
| C316 | 1-130-834-00 | FILM 1MF 10% 63V |
| C317 | 1-162-294-31 | CERAMIC 0.001MF 10% 50V |
| C318 | 1-102-959-00 | CERAMIC 22PF 5% 50V |

| Ref.No. | Part No. | Description | | | |
|---|---|---|---|---|---|
| C319 | 1-162-179-11 | CERAMIC | 0.1MF | | 50V |
| C320 | 1-126-022-11 | ELECT | 47MF | 20% | 10V |
| C321 | 1-162-201-31 | CERAMIC | 12PF | 5% | 50V |
| C322 | 1-162-201-31 | CERAMIC | 12PF | 5% | 50V |
| C323 | 1-162-179-11 | CERAMIC | 0.1MF | | 50V |
| C324 | 1-164-159-11 | CERAMIC | 0.1MF | | 50V |
| C325 | 1-162-179-11 | CERAMIC | 0.1MF | | 50V |
| C328 | 1-162-294-31 | CERAMIC | 0.001MF | 10% | 50V |
| C329 | 1-124-994-11 | ELECT | 100MF | 20% | 10V |
| C330 | 1-162-294-31 | CERAMIC | 0.001MF | 10% | 50V |
| C331 | 1-162-294-31 | CERAMIC | 0.001MF | 10% | 50V |
| C332 | 1-136-165-00 | FILM | 0.1MF | 5% | 50V |
| C333 | 1-136-165-00 | FILM | 0.1MF | 5% | 50V |
| C334 | 1-162-290-31 | CERAMIC | 470PF | 10% | 50V |
| C335 | 1-161-377-00 | CERAMIC | 0.0047MF | 30% | 16V |
| C336 | 1-126-022-11 | ELECT | 47MF | 20% | 10V |
| C337 | 1-162-179-11 | CERAMIC | 0.1MF | | 50V |
| C338 | 1-136-157-00 | FILM | 0.022MF | 5% | 50V |
| C339 | 1-130-473-00 | MYLAR | 0.0015MF | 5% | 50V |
| C340 | 1-136-158-00 | FILM | 0.027MF | 5% | 50V |
| C341 | 1-136-153-00 | FILM | 0.01MF | 5% | 50V |
| C342 | 1-130-474-00 | MYLAR | 0.0018MF | 5% | 50V |
| C343 | 1-136-159-00 | FILM | 0.033MF | 5% | 50V |
| C344 | 1-136-154-00 | FILM | 0.012MF | 5% | 50V |
| C345 | 1-136-154-00 | FILM | 0.012MF | 5% | 50V |
| C346 | 1-136-159-00 | FILM | 0.033MF | 5% | 50V |
| C347 | 1-130-474-00 | MYLAR | 0.0018MF | 5% | 50V |
| C349 | 1-126-022-11 | ELECT | 47MF | 20% | 10V |
| C350 | 1-162-294-31 | CERAMIC | 0.001MF | 10% | 50V |
| C351 | 1-162-294-31 | CERAMIC | 0.001MF | 10% | 50V |
| C352 | 1-136-157-00 | FILM | 0.022MF | 5% | 50V |
| C353 | 1-136-157-00 | FILM | 0.022MF | 5% | 50V |
| C354 | 1-126-022-11 | ELECT | 47MF | 20% | 10V |
| C355 | 1-164-159-11 | CERAMIC | 0.1MF | | 50V |
| C356 | 1-126-022-11 | ELECT | 47MF | 20% | 10V |
| C358 | 1-126-023-11 | ELECT | 100MF | 20% | 25V |
| C365 | 1-162-179-11 | CERAMIC | 0.1MF | | 50V |
| C366 | 1-164-159-11 | CERAMIC | 0.1MF | | 50V |
| C367 | 1-126-022-11 | ELECT | 47MF | 20% | 10V |
| C368 | 1-162-179-11 | CERAMIC | 0.1MF | | 50V |
| C369 | 1-164-159-11 | CERAMIC | 0.1MF | | 50V |
| C370 | 1-126-022-11 | ELECT | 47MF | 20% | 10V |
| C403 | 1-162-294-31 | CERAMIC | 0.001MF | 10% | 50V |
| C405 | 1-124-791-11 | ELECT | 1MF | 20% | 50V |
| C406 | 1-126-022-11 | ELECT | 47MF | 20% | 10V |
| C407 | 1-126-023-11 | ELECT | 100MF | 20% | 25V |
| C412 | 1-124-473-11 | ELECT | 1000MF | 20% | 10V |
| C413 | 1-124-927-11 | ELECT | 4.7MF | 20% | 50V |
| C421 | 1-136-154-00 | FILM | 0.012MF | 5% | 50V |
| C422 | 1-136-157-00 | FILM | 0.022MF | 5% | 50V |
| C423 | 1-162-207-31 | CERAMIC | 22PF | 5% | 50V |
| C424 | 1-164-159-11 | CERAMIC | 0.1MF | | 50V |
| C425 | 1-164-159-11 | CERAMIC | 0.1MF | | 50V |
| C426 | 1-124-927-11 | ELECT | 4.7MF | 20% | 50V |
| C427 | 1-126-023-11 | ELECT | 100MF | 20% | 25V |
| C430 | 1-124-927-11 | ELECT | 4.7MF | 20% | 50V |
| C501 | 1-162-179-11 | CERAMIC | 0.1MF | | 50V |

| Ref.No. | Part No. | Description | | | |
|---|---|---|---|---|---|
| C502 | 1-162-179-11 | CERAMIC | 0.1MF | | 50V |
| C503 | 1-126-023-11 | ELECT | 100MF | 20% | 25V |
| C504 | 1-136-165-00 | FILM | 0.1MF | 5% | 50V |
| C505 | 1-126-023-11 | ELECT | 100MF | 20% | 25V |
| C506 | 1-136-165-00 | FILM | 0.1MF | 5% | 50V |
| C507 | 1-126-023-11 | ELECT | 100MF | 20% | 25V |
| C508 | 1-136-165-00 | FILM | 0.1MF | 5% | 50V |
| C511 | 1-126-023-11 | ELECT | 100MF | 20% | 25V |
| C512 | 1-136-165-00 | FILM | 0.1MF | 5% | 50V |
| C513 | 1-136-165-00 | FILM | 0.1MF | 5% | 50V |
| C514 | 1-126-023-11 | ELECT | 100MF | 20% | 25V |
| C515 | 1-136-165-00 | FILM | 0.1MF | 5% | 50V |
| C516 | 1-126-023-11 | ELECT | 100MF | 20% | 25V |
| C517 | 1-136-165-00 | FILM | 0.1MF | 5% | 50V |
| C518 | 1-126-023-11 | ELECT | 100MF | 20% | 25V |
| C519 | 1-136-165-00 | FILM | 0.1MF | 5% | 50V |
| C520 | 1-124-713-11 | ELECT | 470MF | 20% | 35V |
| C521 | 1-126-024-11 | ELECT | 220MF | 20% | 25V |
| C522 | 1-126-024-11 | ELECT | 220MF | 20% | 25V |
| C523 | 1-162-179-11 | CERAMIC | 0.1MF | | 50V |
| C524 | 1-130-834-00 | FILM | 1MF | 10% | 63V |
| C525 | 1-136-153-00 | FILM | 0.01MF | 5% | 50V |
| C526 | 1-162-284-31 | CERAMIC | 150PF | 10% | 50V |
| C527 | 1-162-199-31 | CERAMIC | 10PF | 5% | 50V |
| C528 | 1-126-062-11 | ELECT | 47MF | 20% | 63V |
| C529 | 1-162-199-31 | CERAMIC | 10PF | 5% | 50V |
| C530 | 1-162-211-31 | CERAMIC | 33PF | 5% | 50V |
| C531 | 1-136-157-00 | FILM | 0.022MF | 5% | 50V |
| C532 | 1-136-157-00 | FILM | 0.022MF | 5% | 50V |
| C533 | 1-136-157-00 | FILM | 0.022MF | 5% | 50V |
| C534 | 1-162-179-11 | CERAMIC | 0.1MF | | 50V |
| C535 | 1-124-922-11 | ELECT | 1000MF | 20% | 63V |
| C536 | 1-124-922-11 | ELECT | 1000MF | 20% | 63V |
| C537 | 1-126-024-11 | ELECT | 220MF | 20% | 25V |
| C538 | 1-126-024-11 | ELECT | 220MF | 20% | 25V |
| C539 | 1-126-059-11 | ELECT | 10MF | 20% | 63V |
| C540 | 1-126-059-11 | ELECT | 10MF | 20% | 63V |
| C541 | 1-124-273-00 | ELECT | 3.3MF | 20% | 50V |
| C542 | 1-126-059-11 | ELECT | 10MF | 20% | 63V |
| C543 | 1-162-179-11 | CERAMIC | 0.1MF | | 50V |
| C544 | 1-126-043-11 | ELECT | 0.47MF | 20% | 50V |
| C550 | 1-126-062-11 | ELECT | 47MF | 20% | 63V |
| C551 | 1-126-062-11 | ELECT | 47MF | 20% | 63V |
| C552 | 1-124-484-11 | ELECT | 220MF | 20% | 35V |
| C553 | 1-124-484-11 | ELECT | 220MF | 20% | 35V |
| C554 | 1-162-179-11 | CERAMIC | 0.1MF | | 50V |
| C555 | 1-162-179-11 | CERAMIC | 0.1MF | | 50V |
| C556 | 1-162-179-11 | CERAMIC | 0.1MF | | 50V |
| C557 | 1-162-179-11 | CERAMIC | 0.1MF | | 50V |
| C558 | 1-136-165-00 | FILM | 0.1MF | 5% | 50V |
| C559 | 1-126-059-11 | ELECT | 10MF | 20% | 63V |
| C701 | 1-124-584-00 | ELECT | 100MF | 20% | 10V |
| C702 | 1-124-994-11 | ELECT | 100MF | 20% | 10V |
| C710 | 1-164-159-11 | CERAMIC | 0.1MF | | 50V |
| C711 | 1-164-159-11 | CERAMIC | 0.1MF | | 50V |
| C712 | 1-164-159-11 | CERAMIC | 0.1MF | | 50V |
| C713 | 1-164-159-11 | CERAMIC | 0.1MF | | 50V |

| Ref.No. | Part No. | Description | | | |
|---|---|---|---|---|---|
| C714 | 1-164-159-11 | CERAMIC | 0.1MF | | 50V |
| C901 | 1-126-017-11 | ELECT | 6800MF | 20% | 16V |
| C902 | 1-164-159-11 | CERAMIC | 0.1MF | | 50V |
| C903 | 1-126-016-11 | ELECT | 4700MF | 20% | 16V |
| C904 | 1-124-473-11 | ELECT | 1000MF | 20% | 10V |
| C905 | 1-126-104-11 | ELECT | 470MF | 20% | 35V |
| C906 | 1-126-104-11 | ELECT | 470MF | 20% | 35V |
| C907 | 1-124-473-11 | ELECT | 1000MF | 20% | 10V |
| C908 | 1-126-052-11 | ELECT | 100MF | 20% | 50V |
| C909 | 1-164-159-11 | CERAMIC | 0.1MF | | 50V |
| C910 | 1-126-129-11 | ELECT | 6800MF | 20% | 35V |
| C911 | 1-126-129-11 | ELECT | 6800MF | 20% | 35V |
| C912 | 1-124-130-00 | ELECT | 100MF | 20% | 63V |
| C913 | 1-124-922-11 | ELECT | 1000MF | 20% | 63V |
| C914 | 1-124-922-11 | ELECT | 1000MF | 20% | 63V |
| C922 ⚠ | 1-161-742-00 | CERAMIC | 0.0022MF | 20% | 400V |
| C923 ⚠ | 1-161-742-00 | CERAMIC | 0.0022MF | 20% | 400V |
| C924 ⚠ | 1-161-742-00 | (55ES)...CERAMIC | 0.0022MF | 20% | 400V |
| C925 ⚠ | 1-161-742-00 | CERAMIC | 0.0022MF | 20% | 400V |
| C926 | 1-136-165-00 | FILM | 0.1MF | 5% | 50V |
| C927 | 1-136-177-00 | FILM | 1MF | 5% | 50V |
| C928 ⚠ | 1-161-744-00 | CERAMIC | 0.01MF | | 400V |
| C930 | 1-164-159-11 | CERAMIC | 0.1MF | | 50V |
| C931 | 1-124-556-11 | ELECT | 2200MF | 20% | 16V |
| C932 | 1-164-159-11 | CERAMIC | 0.1MF | | 50V |
| C933 | 1-164-159-11 | CERAMIC | 0.1MF | | 50V |
| C951 | 1-163-038-00 | CERAMIC CHIP | 0.1MF | | 25V |
| C953 | 1-163-038-00 | CERAMIC CHIP | 0.1MF | | 25V |
| C954 | 1-163-005-11 | CERAMIC CHIP | 470PF | 10% | 50V |
| C955 | 1-164-005-11 | CERAMIC CHIP | 0.47MF | | 25V |
| C956 | 1-124-778-00 | ELECT CHIP | 22MF | 20% | 6.3V |
| C957 | 1-163-038-00 | CERAMIC CHIP | 0.1MF | | 25V |
| C958 | 1-163-005-11 | CERAMIC CHIP | 470PF | 10% | 50V |
| C959 | 1-163-005-11 | CERAMIC CHIP | 470PF | 10% | 50V |
| C960 | 1-163-011-11 | CERAMIC CHIP | 0.0015MF | 10% | 50V |
| C961 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | 10% | 50V |
| C962 | 1-164-004-11 | CERAMIC CHIP | 0.1MF | 10% | 25V |
| C963 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | 10% | 50V |
| C965 | 1-164-298-11 | CERAMIC CHIP | 0.15MF | 10% | 25V |
| C966 | 1-163-038-00 | CERAMIC CHIP | 0.1MF | | 25V |
| C967 | 1-124-778-00 | ELECT CHIP | 22MF | 20% | 6.3V |
| C968 | 1-163-038-00 | CERAMIC CHIP | 0.1MF | | 25V |
| C969 | 1-164-005-11 | CERAMIC CHIP | 0.47MF | | 25V |
| C971 | 1-164-298-11 | CERAMIC CHIP | 0.15MF | 10% | 25V |
| C973 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | 10% | 50V |
| C974 | 1-164-004-11 | CERAMIC CHIP | 0.1MF | 10% | 25V |
| C975 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | 10% | 50V |
| C976 | 1-163-011-11 | CERAMIC CHIP | 0.0015MF | 10% | 50V |
| C977 | 1-163-020-00 | CERAMIC CHIP | 0.0082MF | 10% | 50V |
| C978 | 1-162-638-11 | CERAMIC CHIP | 1MF | | 16V |
| C979 | 1-163-020-00 | CERAMIC CHIP | 0.0082MF | 10% | 50V |
| C980 | 1-163-809-11 | CERAMIC CHIP | 0.047MF | 10% | 25V |
| C981 | 1-163-809-11 | CERAMIC CHIP | 0.047MF | 10% | 25V |
| C982 | 1-163-005-11 | CERAMIC CHIP | 470PF | 10% | 50V |
| C983 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | 10% | 50V |
| C984 | 1-163-005-11 | CERAMIC CHIP | 470PF | 10% | 50V |
| C985 | 1-163-005-11 | CERAMIC CHIP | 470PF | 10% | 50V |

| Ref.No. | Part No. | Description |
|---|---|---|
| CN01 | *1-564-336-00 | PIN, CONNECTOR 2P |
| CN02 | *1-564-336-61 | PIN, CONNECTOR 2P |
| CN03 | *1-564-498-11 | PIN, CONNECTOR 5P |
| CN034 | *1-564-718-11 | PIN, CONNECTOR (SMALL TYPE) 2P |
| CN035 | *1-564-706-11 | PIN, CONNECTOR (SMALL TYPE) 4P |
| CN036 | *1-564-704-11 | PIN, CONNECTOR (SMALL TYPE) 2P |
| CN037 | *1-564-704-11 | PIN, CONNECTOR (SMALL TYPE) 2P |
| CN051 | *1-563-660-11 | CONNECTOR 9P |
| CN052 | *1-563-660-11 | CONNECTOR 9P |
| CN102 | *1-568-369-11 | HOUSING,CONNECTOR(PC BOARD) 8P |
| CN103 | *1-564-706-11 | PIN, CONNECTOR (SMALL TYPE) 4P |
| CN104 | *1-564-337-61 | PIN, CONNECTOR 3P |
| CN105 | *1-564-337-00 | PIN, CONNECTOR 3P |
| CN106 | *1-564-338-00 | PIN, CONNECTOR 4P |
| CN131 | *1-564-712-11 | PIN, CONNECTOR (SMALL TYPE)10P |
| CN132 | *1-564-709-11 | PIN, CONNECTOR (SMALL TYPE) 7P |
| CN151 | *1-564-519-11 | PLUG, CONNECTOR 4P |
| CN301 | *1-564-706-31 | PIN, CONNECTOR (SMALL TYPE) 4P |
| CN302 | *1-564-710-11 | PIN, CONNECTOR (SMALL TYPE) 8P |
| CN304 | *1-564-707-11 | PIN, CONNECTOR (SMALL TYPE) 5P |
| CN305 | *1-564-706-11 | PIN, CONNECTOR (SMALL TYPE) 4P |
| CN307 | *1-564-714-11 | PIN, CONNECTOR (SMALL TYPE)12P |
| CN308 | *1-564-339-00 | PIN, CONNECTOR 5P |
| CN311 | *1-564-712-11 | PIN, CONNECTOR (SMALL TYPE)10P |
| CN312 | *1-564-709-11 | PIN, CONNECTOR (SMALL TYPE) 7P |
| CN332 | *1-564-336-00 | PIN, CONNECTOR 2P |
| CN333 | *1-564-514-11 | PLUG, CONNECTOR 11P (TEST) |
| CN391 | *1-564-511-11 | PLUG, CONNECTOR 8P |
| CN392 | *1-564-506-11 | PLUG, CONNECTOR 3P |
| CN393 | *1-564-505-11 | PLUG, CONNECTOR 2P |
| CN394 | *1-564-505-11 | (75ES/700)...PLUG, CONNECTOR 2P |
| CN501 | *1-560-339-00 | PIN, CONNECTOR 9P |
| CN502 | *1-560-339-00 | PIN, CONNECTOR 9P |
| CN512 | *1-564-519-11 | PLUG, CONNECTOR 4P |
| CN513 | *1-564-507-11 | PLUG, CONNECTOR 4P |
| CN515 | *1-564-507-11 | PLUG, CONNECTOR 4P |
| CN516 | *1-564-507-11 | PLUG, CONNECTOR 4P |
| CN571 | *1-564-341-11 | PIN, CONNECTOR 7P |
| CN572 | *1-564-340-61 | PIN, CONNECTOR 6P |
| CN573 | *1-564-338-00 | PIN, CONNECTOR 4P |
| CN576 | *1-564-706-11 | PIN, CONNECTOR (SMALL TYPE) 4P |
| CN774 | *1-564-342-11 | PIN, CONNECTOR 8P |
| CN775 | *1-564-336-00 | PIN, CONNECTOR 2P |
| CN901 | *1-564-321-00 | PIN, CONNECTOR 2P |
| CN933 | *1-564-518-11 | PLUG, CONNECTOR 3P |
| CN951 | *1-564-722-11 | PIN, CONNECTOR (SMALL TYPE) 6P |
| CN952 | *1-564-728-11 | PIN, CONNECTOR (SMALL TYPE)12P |
| D305 | 8-719-107-94 | DIODE 1SS202-1 |
| D306 | 8-719-200-82 | DIODE 11ES2 |
| D313 | 8-719-914-13 | DIODE HZ4CLL |
| D314 | 8-719-200-82 | DIODE 11ES2 |
| D320 | 8-719-107-94 | DIODE 1SS202-1 |
| D501 | 8-719-901-59 | DIODE KV1320 |
| D502 | 8-719-903-27 | DIODE 1SS168 |
| D503 | 8-719-107-94 | DIODE 1SS202-1 |
| D504 | 8-719-200-77 | DIODE 10E2N |
| D505 | 8-719-200-82 | DIODE 11ES2 |

**Note:**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

**Note:**
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

| Ref.No. | Part No. | Description |
|---|---|---|
| D506 | 8-719-200-82 | DIODE 11ES2 |
| D507 | 8-719-107-94 | DIODE 1SS202-1 |
| D510 | 8-719-107-94 | DIODE 1SS202-1 |
| D511 | 8-719-107-94 | DIODE 1SS202-1 |
| D512 | 8-719-107-94 | DIODE 1SS202-1 |
| D513 | 8-719-107-94 | DIODE 1SS202-1 |
| D701 | 8-719-107-94 | DIODE 1SS202-1 |
| D703 | 8-719-107-94 | DIODE 1SS202-1 |
| D901 | 8-719-311-72 | DIODE RBV-406H-01 |
| D905 | 8-719-200-82 | DIODE 11ES2 |
| D906 | 8-719-200-82 | DIODE 11ES2 |
| D907 | 8-719-200-89 | DIODE 31DF2-FA |
| D908 | 8-719-200-89 | DIODE 31DF2-FA |
| D909 | 8-719-200-89 | DIODE 31DF2-FA |
| D910 | 8-719-200-89 | DIODE 31DF2-FA |
| D911 | 8-719-107-94 | DIODE 1SS202-1 |
| D912 | 8-719-107-94 | DIODE 1SS202-1 |
| D913 | 8-719-200-82 | DIODE 11ES2 |
| D914 | 8-719-200-82 | DIODE 11ES2 |
| D915 | 8-719-200-82 | DIODE 11ES2 |
| D916 | 8-719-200-82 | DIODE 11ES2 |
| D931 | 8-719-107-94 | DIODE 1SS202-1 |
| D933 | 8-719-107-94 | DIODE 1SS202-1 |
| D934 | 8-719-200-82 | DIODE 11ES2 |
| F901 ⚠ | 1-532-286-00 | (55ES).....FUSE, TIME-LAG (2.5A) |
| F901 ⚠ | 1-532-744-11 | (75ES/700)...FUSE, GLASS TUBE (2.5A) |
| FL701 | 1-519-562-11 | INDICATOR TUBE, FLUORESCENT |
| IC11 | 8-759-013-22 | IC LM358M |
| IC101 | 8-759-900-72 | IC NE5532P |
| IC101A | 8-759-107-68 | IC CX20115A |
| IC102 | 8-759-900-72 | IC NE5532P |
| IC102A | 8-759-013-22 | IC LM358M |
| IC201 | 8-759-900-72 | IC NE5532P |
| IC202 | 8-759-900-72 | IC NE5532P |
| IC301 | 8-759-917-18 | IC SN74HCU04N |
| IC302 | 8-759-232-49 | IC TC74HC132AP |
| IC303 | 8-759-917-18 | IC SN74HCU04N |
| IC304 | 8-759-135-80 | IC UPC358C |
| IC305 | 8-759-926-17 | IC SN74HC153NS |
| IC306 | 8-759-947-57 | IC CXD1136Q |
| IC307 | 8-752-334-27 | IC CXD2601Q |
| IC308 | 8-759-906-24 | IC SN74LS624N |
| IC309 | 8-759-925-90 | IC SN74HC74NS |
| IC310 | 8-752-330-68 | IC CXK58257M-12L |
| IC311 | 8-752-030-63 | IC CXA1046M |
| IC312 | 8-752-816-04 | IC CXP80524-012Q |
| IC314 | 8-759-008-71 | IC LM324N |
| IC315 | 8-759-916-20 | IC SN74HC14N |
| IC316 | 8-759-135-80 | IC UPC358C |
| IC317 | 8-759-987-16 | IC LM393P |
| IC318 | 8-759-135-80 | IC UPC358C |
| IC319 | 8-759-910-70 | IC MB3763PS |
| IC320 | 8-759-633-65 | IC M54641L |
| IC321 | 8-759-971-12 | IC PST529E |
| IC322 | 8-759-604-35 | IC M5F78M05L |
| IC331 | 8-759-977-72 | IC GP1F31R (DIGITAL IN OPTICAL) |

| Ref.No. | Part No. | Description |
|---|---|---|
| IC332 | 8-759-977-71 | IC GP1F31T (DIGITAL OUT OPTICAL) |
| IC333 | 8-759-917-18 | IC SN74HCU04N |
| IC431 | 8-759-925-78 | IC SN74HC10NS |
| IC432 | 8-759-995-76 | IC PST529C |
| IC501 | 8-759-999-32 | IC SM5813APT |
| IC503 | 8-759-917-11 | IC SN74HC393N |
| IC504 | 8-752-335-51 | (75ES).....IC CXD2552Q-1 |
| IC504 | 8-752-335-52 | (55ES/700)...IC CXD2552Q-2 |
| IC505 | 8-759-250-81 | IC TC5081AP |
| IC506 | 8-759-031-58 | IC SC7SU04F |
| IC507 | 8-759-604-35 | IC M5F78M05L |
| IC508 | 8-759-604-36 | IC M5F78M08L |
| IC509 | 8-759-981-98 | IC RC4560DD |
| IC510 | 8-759-945-58 | IC RC4558P |
| IC520 | 8-759-602-83 | IC M5238P |
| IC521 | 8-759-972-47 | IC LF412CN |
| IC522 | 8-759-999-09 | IC CS5326-KP |
| IC523 | 8-759-604-35 | IC M5F78M05L |
| IC524 | 8-759-982-52 | IC RC79M05FA |
| IC701 | 8-752-811-84 | IC CXP5058H-652Q |
| IC702 | 8-759-995-09 | IC MSM6338RS |
| IC703 | 8-752-330-59 | IC CXK1011P |
| IC704 | 8-749-920-59 | IC A1QH3020S |
| IC931 | 8-759-148-79 | IC UPC2406HF |
| IC932 | 8-759-634-55 | IC M5F7805L-720 |
| IC951 | 8-752-032-26 | IC CXA1045Q |
| J151 | 1-568-101-11 | JACK, PIN 4P (LINE IN/OUT) |
| J161 | 1-565-327-11 | JACK, LARGE TYPE 1P (PHONES) |
| J181 | 1-566-922-21 | (75ES/700)...JACK, PIN 1P (DIGITAL OUT COAXIAL) |
| J191 | 1-568-750-21 | JACK, PIN (1P SHIELD TYPE) (DIGITAL IN COAXIAL) |
| JW11 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W |
| JW12 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W |
| JW101 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W |
| JW102 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W |
| JW103 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W |
| JW104 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W |
| JW105 | 1-216-296-00 | METAL GLA7F 0 5% 1/8W |
| JW106 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W |
| JW107 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W |
| JW108 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W |
| JW109 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W |
| JW110 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W |
| JW111 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W |
| JW112 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W |
| JW113 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W |
| L301 | 1-410-509-11 | INDUCTOR 10UH |
| L302 | 1-410-498-11 | INDUCTOR 1.2UH |
| L303 | 1-410-509-11 | INDUCTOR 10UH |
| L304 | 1-410-509-11 | INDUCTOR 10UH |
| L305 | 1-410-509-11 | INDUCTOR 10UH |
| L306 | 1-410-509-11 | INDUCTOR 10UH |
| L307 | 1-410-509-11 | INDUCTOR 10UH |
| L310 | 1-410-953-11 | (75ES/700)...INDUCTOR, SMALL TYPE |
| L501 | 1-460-042-11 | COIL (WITH CORE) 4.7UH |

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| Ref.No. | Part No. | Description |
|---|---|---|
| L502 | 1-460-042-11 | COIL (WITH CORE) 4.7UH |
| L503 | 1-410-324-11 | INDUCTOR 4.7UH |
| L505 | 1-410-324-11 | INDUCTOR 4.7UH |
| L506 | 1-410-324-11 | INDUCTOR 4.7UH |
| L901 ⚠ | 1-424-051-11 | COIL, LINE FILTER |
| L951 | 1-408-777-00 | INDUCTOR CHIP 10UH |
| L952 | 1-408-791-00 | INDUCTOR CHIP 150UH |
| L953 | 1-408-791-00 | INDUCTOR CHIP 150UH |
| M901 | A-2003-448-A | MOTOR ASSY (CASSETTE COMPARTMENT) |
| M902 | 8-835-306-01 | MOTOR, DC U-17A (CAPSTAN) |
| M903 | A-2003-545-A | MOTOR ASSY (CONTROL) |
| M905 | 8-835-346-11 | MOTOR, DC U-16B (REEL) |
| PH11 | 8-719-751-42 | DIODE NJL5141E-AA |
| PH21 | 8-719-751-42 | DIODE NJL5141E-AA |
| PH901 | 1-808-957-11 | PHOTO SENSOR (END T) |
| PH902 | 1-808-957-11 | PHOTO SENSOR (END S) |
| PL301 | 1-518-664-11 | LAMP, PILOT |
| PL302 | 1-518-664-11 | LAMP, PILOT |
| PM901 | 1-464-724-31 | ENCODER, ROTARY |
| PM902 | 1-454-462-21 | SOLENOID, PLUNGER (LOADING) |
| PM903 | 1-454-482-21 | SOLENOID, PLUNGER (REEL MOTOR CONTROL) |
| Q11 | 8-729-216-22 | TRANSISTOR 2SA1162 |
| Q21 | 8-729-216-22 | TRANSISTOR 2SA1162 |
| Q101 | 8-729-107-85 | TRANSISTOR 2SC3623A-K |
| Q101A | 8-729-100-66 | TRANSISTOR 2SC1623 |
| Q102 | 8-729-107-85 | TRANSISTOR 2SC3623A-K |
| Q102A | 8-729-101-07 | TRANSISTOR 2SB798-DL |
| Q103 | 8-729-107-85 | TRANSISTOR 2SC3623A-K |
| Q201 | 8-729-107-85 | TRANSISTOR 2SC3623A-K |
| Q202 | 8-729-107-85 | TRANSISTOR 2SC3623A-K |
| Q203 | 8-729-107-85 | TRANSISTOR 2SC3623A-K |
| Q301 | 8-729-119-78 | TRANSISTOR 2SC2785-HFE |
| Q302 | 8-729-801-93 | TRANSISTOR 2SD1387 |
| Q303 | 8-729-400-82 | TRANSISTOR 2SD1266-P |
| Q304 | 8-729-801-84 | TRANSISTOR 2SB1013-4 |
| Q305 | 8-729-900-80 | TRANSISTOR DTC114ES |
| Q306 | 8-729-900-80 | TRANSISTOR DTC114ES |
| Q317 | 8-729-900-80 | TRANSISTOR DTC114ES |
| Q318 | 8-729-900-80 | TRANSISTOR DTC114ES |
| Q319 | 8-729-900-80 | TRANSISTOR DTC114ES |
| Q320 | 8-729-801-84 | TRANSISTOR 2SB1013-4 |
| Q321 | 8-729-801-93 | TRANSISTOR 2SD1387 |
| Q322 | 8-729-900-80 | TRANSISTOR DTC114ES |
| Q401 | 8-729-119-78 | TRANSISTOR 2SC2785-HFE |
| Q402 | 8-729-119-78 | TRANSISTOR 2SC2785-HFE |
| Q502 | 8-729-200-56 | TRANSISTOR 2SK241GR |
| Q503 | 8-729-200-56 | TRANSISTOR 2SK241GR |
| Q504 | 8-729-900-61 | TRANSISTOR DTA114ES |
| Q505 | 8-729-900-80 | TRANSISTOR DTC114ES |
| Q506 | 8-729-900-61 | TRANSISTOR DTA114ES |
| Q507 | 8-729-900-80 | TRANSISTOR DTC114ES |
| Q508 | 8-729-900-80 | TRANSISTOR DTC114ES |
| Q509 | 8-729-900-61 | TRANSISTOR DTA114ES |
| Q510 | 8-729-107-85 | TRANSISTOR 2SC3623A-K |
| Q511 | 8-729-900-61 | TRANSISTOR DTA114ES |
| Q701 | 8-729-119-78 | TRANSISTOR 2SC2785-HFE |
| Q702 | 8-729-119-78 | TRANSISTOR 2SC2785-HFE |
| Q707 | 8-729-119-78 | TRANSISTOR 2SC2785-HFE |
| Q708 | 8-729-119-78 | TRANSISTOR 2SC2785-HFE |
| Q901 | 8-729-140-93 | TRANSISTOR 2SB733-34 |
| Q902 | 8-729-167-72 | TRANSISTOR 2SC2676-1F |
| Q903 | 8-729-127-53 | TRANSISTOR 2SC2275-P |
| Q904 | 8-729-167-72 | TRANSISTOR 2SC2676-1F |
| Q905 | 8-729-113-92 | TRANSISTOR 2SA1138-1F |
| Q906 | 8-729-190-53 | TRANSISTOR 2SA985A |
| Q907 | 8-729-113-92 | TRANSISTOR 2SA1138-1F |
| Q921 | 8-729-900-80 | TRANSISTOR DTC114ES |
| Q922 | 8-729-900-80 | TRANSISTOR DTC114ES |
| Q923 | 8-729-203-02 | TRANSISTOR 2SK30A-O |
| Q924 | 8-729-203-02 | TRANSISTOR 2SK30A-O |
| Q925 | 8-729-920-97 | TRANSISTOR 2SB1187-EF |
| Q931 | 8-729-900-80 | TRANSISTOR DTC114ES |
| Q932 | 8-729-119-76 | TRANSISTOR 2SA1175-HFE |
| R11 | 1-216-041-00 | METAL GLAZE 470 5% 1/10W |
| R12 | 1-216-081-00 | METAL GLAZE 22K 5% 1/10W |
| R13 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W |
| R14 | 1-216-103-00 | METAL GLAZE 180K 5% 1/10W |
| R15 | 1-216-057-00 | METAL GLAZE 2.2K 5% 1/10W |
| R16 | 1-216-077-00 | METAL GLAZE 15K 5% 1/10W |
| R17 | 1-216-067-00 | METAL GLAZE 5.6K 5% 1/10W |
| R21 | 1-216-041-00 | METAL GLAZE 470 5% 1/10W |
| R22 | 1-216-081-00 | METAL GLAZE 22K 5% 1/10W |
| R23 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W |
| R24 | 1-216-103-00 | METAL GLAZE 180K 5% 1/10W |
| R25 | 1-216-057-00 | METAL GLAZE 2.2K 5% 1/10W |
| R101 | 1-247-154-00 | CARBON 9.1K 5% 1/4W |
| R101A | 1-216-061-00 | METAL GLAZE 3.3K 5% 1/10W |
| R102 | 1-247-154-00 | CARBON 9.1K 5% 1/4W |
| R102A | 1-216-075-00 | METAL GLAZE 12K 5% 1/10W |
| R103 | 1-247-721-11 | CARBON 4.7K 5% 1/4W |
| R103A | 1-216-029-00 | METAL GLAZE 150 5% 1/10W |
| R104 | 1-247-721-11 | CARBON 4.7K 5% 1/4W |
| R104A | 1-216-058-00 | METAL GLAZE 2.4K 5% 1/10W |
| R105 | 1-247-152-00 | CARBON 8.2K 5% 1/4W |
| R105A | 1-216-057-00 | METAL GLAZE 2.2K 5% 1/10W |
| R106 | 1-249-583-11 | CARBON 20K 5% 1/4W |
| R106A | 1-216-084-00 | METAL GLAZE 30K 5% 1/10W |
| R107 | 1-247-152-00 | CARBON 8.2K 5% 1/4W |
| R107A | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W |
| R108 | 1-249-583-11 | CARBON 20K 5% 1/4W |
| R108A | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W |
| R109 | 1-247-722-11 | CARBON 5.6K 5% 1/4W |
| R109A | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W |
| R110 | 1-247-722-11 | CARBON 5.6K 5% 1/4W |
| R110A | 1-216-089-00 | METAL GLAZE 47K 5% 1/10W |
| R111 | 1-247-722-11 | CARBON 5.6K 5% 1/4W |
| R111A | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W |
| R112 | 1-247-722-11 | CARBON 5.6K 5% 1/4W |
| R112A | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W |
| R113 | 1-249-556-11 | CARBON 1.5K 5% 1/4W |
| R113A | 1-216-025-00 | METAL GLAZE 100 5% 1/10W |

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| Ref.No. | Part No. | Description | | | |
|---|---|---|---|---|---|
| R114 | 1-249-556-11 | CARBON | 1.5K | 5% | 1/4W |
| R115 | 1-249-469-11 | CARBON | 100K | 5% | 1/4W |
| R116 | 1-247-704-11 | CARBON | 220 | 5% | 1/4W |
| R117 | 1-249-469-11 | CARBON | 100K | 5% | 1/4W |
| R118 | 1-249-497-11 | CARBON | 33K | 5% | 1/4W |
| R119 | 1-247-721-11 | CARBON | 4.7K | 5% | 1/4W |
| R120 | 1-249-462-11 | CARBON | 22K | 5% | 1/4W |
| R121 | 1-247-704-11 | CARBON | 220 | 5% | 1/4W |
| R122 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R123 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R124 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R125 | 1-246-545-00 | CARBON | 1M | 5% | 1/4W |
| R126 | 1-246-545-00 | CARBON | 1M | 5% | 1/4W |
| R130 | 1-246-545-00 | CARBON | 1M | 5% | 1/4W |
| R131 | 1-247-717-11 | CARBON | 2.2K | 5% | 1/4W |
| R132 | 1-249-586-11 | CARBON | 27K | 5% | 1/4W |
| R133 | 1-249-469-11 | CARBON | 100K | 5% | 1/4W |
| R134 | 1-249-520-11 | CARBON | 47 | 5% | 1/4W |
| R135 | 1-249-512-11 | CARBON | 22 | 5% | 1/4W |
| R151 | 1-249-586-11 | CARBON | 27K | 5% | 1/4W |
| R152 | 1-249-586-11 | CARBON | 27K | 5% | 1/4W |
| R153 | 1-249-657-11 | CARBON | 220 | 5% | 1/2W |
| R154 | 1-249-657-11 | CARBON | 220 | 5% | 1/2W |
| R181 | 1-249-405-11 | (75ES/700)...CARBON | 100 | 5% | 1/4W |
| R183 | 1-247-804-11 | (75ES/700)...CARBON | 75 | 5% | 1/4W |
| R191 | 1-247-804-11 | CARBON | 75 | 5% | 1/4W |
| R201 | 1-247-154-00 | CARBON | 9.1K | 5% | 1/4W |
| R202 | 1-247-154-00 | CARBON | 9.1K | 5% | 1/4W |
| R203 | 1-247-721-11 | CARBON | 4.7K | 5% | 1/4W |
| R204 | 1-247-721-11 | CARBON | 4.7K | 5% | 1/4W |
| R205 | 1-247-152-00 | CARBON | 8.2K | 5% | 1/4W |
| R206 | 1-249-583-11 | CARBON | 20K | 5% | 1/4W |
| R207 | 1-247-152-00 | CARBON | 8.2K | 5% | 1/4W |
| R208 | 1-249-583-11 | CARBON | 20K | 5% | 1/4W |
| R209 | 1-247-722-11 | CARBON | 5.6K | 5% | 1/4W |
| R210 | 1-247-722-11 | CARBON | 5.6K | 5% | 1/4W |
| R211 | 1-247-722-11 | CARBON | 5.6K | 5% | 1/4W |
| R212 | 1-247-722-11 | CARBON | 5.6K | 5% | 1/4W |
| R213 | 1-249-556-11 | CARBON | 1.5K | 5% | 1/4W |
| R214 | 1-249-556-11 | CARBON | 1.5K | 5% | 1/4W |
| R215 | 1-249-469-11 | CARBON | 100K | 5% | 1/4W |
| R216 | 1-247-704-11 | CARBON | 220 | 5% | 1/4W |
| R217 | 1-249-469-11 | CARBON | 100K | 5% | 1/4W |
| R218 | 1-249-497-11 | CARBON | 33K | 5% | 1/4W |
| R219 | 1-247-721-11 | CARBON | 4.7K | 5% | 1/4W |
| R220 | 1-249-462-11 | CARBON | 22K | 5% | 1/4W |
| R221 | 1-247-704-11 | CARBON | 220 | 5% | 1/4W |
| R222 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R223 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R224 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R225 | 1-246-545-00 | CARBON | 1M | 5% | 1/4W |
| R226 | 1-246-545-00 | CARBON | 1M | 5% | 1/4W |
| R230 | 1-246-545-00 | CARBON | 1M | 5% | 1/4W |
| R231 | 1-247-717-11 | CARBON | 2.2K | 5% | 1/4W |
| R232 | 1-249-586-11 | CARBON | 27K | 5% | 1/4W |
| R233 | 1-249-469-11 | CARBON | 100K | 5% | 1/4W |
| R234 | 1-249-520-11 | CARBON | 47 | 5% | 1/4W |

| Ref.No. | Part No. | Description | | | |
|---|---|---|---|---|---|
| R235 | 1-249-512-11 | CARBON | 22 | 5% | 1/4W |
| R302 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W |
| R303 | 1-249-421-11 | CARBON | 2.2K | 5% | 1/4W |
| R304 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R305 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W |
| R306 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R307 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R308 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R309 | 1-249-421-11 | CARBON | 2.2K | 5% | 1/4W |
| R310 | 1-249-421-11 | CARBON | 2.2K | 5% | 1/4W |
| R311 | 1-249-435-11 | CARBON | 33K | 5% | 1/4W |
| R312 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R313 | 1-249-433-11 | CARBON | 22K | 5% | 1/4W |
| R314 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W |
| R315 | 1-249-433-11 | CARBON | 22K | 5% | 1/4W |
| R316 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R317 | 1-247-830-11 | CARBON | 910 | 5% | 1/4W |
| R318 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W |
| R319 | 1-249-411-11 | CARBON | 330 | 5% | 1/4W |
| R320 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W |
| R323 | 1-249-401-11 | CARBON | 47 | 5% | 1/4W |
| R324 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R325 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R326 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R327 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W |
| R328 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W |
| R329 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W |
| R330 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W |
| R331 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W |
| R332 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W |
| R333 | 1-249-401-11 | CARBON | 47 | 5% | 1/4W |
| R336 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R337 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R338 | 1-249-435-11 | CARBON | 33K | 5% | 1/4W |
| R339 | 1-249-435-11 | CARBON | 33K | 5% | 1/4W |
| R340 | 1-249-419-11 | CARBON | 1.5K | 5% | 1/4W |
| R341 | 1-249-435-11 | CARBON | 33K | 5% | 1/4W |
| R342 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R343 | 1-249-435-11 | CARBON | 33K | 5% | 1/4W |
| R344 | 1-249-419-11 | CARBON | 1.5K | 5% | 1/4W |
| R345 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R346 | 1-249-435-11 | CARBON | 33K | 5% | 1/4W |
| R347 | 1-249-435-11 | CARBON | 33K | 5% | 1/4W |
| R348 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W |
| R349 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W |
| R350 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R351 ⚠ | 1-215-881-11 | METAL OXIDE | 15 | 5% | 2W F |
| R352 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R353 | 1-249-401-11 | CARBON | 47 | 5% | 1/4W |
| R361 | 1-249-413-11 | CARBON | 470 | 5% | 1/4W |
| R362 | 1-249-393-11 | CARBON | 10 | 5% | 1/4W |
| R363 | 1-249-413-11 | CARBON | 470 | 5% | 1/4W |
| R368 | 1-249-433-11 | CARBON | 22K | 5% | 1/4W |
| R369 | 1-249-423-11 | CARBON | 3.3K | 5% | 1/4W |
| R370 | 1-249-423-11 | CARBON | 3.3K | 5% | 1/4W |
| R371 | 1-249-423-11 | CARBON | 3.3K | 5% | 1/4W |
| R372 | 1-247-727-11 | CARBON | 10 | 5% | 1/2W |

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| Ref.No. | Part No. | Description | | | | |
|---|---|---|---|---|---|---|
| R382 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W | |
| R383 | 1-249-433-11 | CARBON | 22K | 5% | 1/4W | |
| R384 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W | |
| R385 | 1-249-433-11 | CARBON | 22K | 5% | 1/4W | |
| R401 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W | |
| R402 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W | |
| R403 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W | |
| R404 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W | |
| R405 | 1-247-804-11 | CARBON | 75 | 5% | 1/4W | |
| R406 | 1-247-804-11 | CARBON | 75 | 5% | 1/4W | |
| R407 | 1-249-423-11 | CARBON | 3.3K | 5% | 1/4W | |
| R408 | 1-249-423-11 | CARBON | 3.3K | 5% | 1/4W | |
| R409 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W | |
| R410 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W | |
| R411 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W | |
| R412 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W | |
| R413 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W | |
| R414 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W | |
| R415 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W | |
| R416 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W | |
| R417 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W | |
| R418 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W | |
| R419 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W | |
| R420 | 1-249-413-11 | CARBON | 470 | 5% | 1/4W | |
| R421 | 1-249-435-11 | CARBON | 33K | 5% | 1/4W | |
| R422 | 1-249-435-11 | CARBON | 33K | 5% | 1/4W | |
| R423 | 1-249-411-11 | CARBON | 330 | 5% | 1/4W | |
| R424 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W | |
| R431 | 1-214-808-11 | METAL | 4.7 | 1% | 1/2W | |
| R437 | 1-249-409-11 | CARBON | 220 | 5% | 1/4W | |
| R438 | 1-249-409-11 | CARBON | 220 | 5% | 1/4W | |
| R439 | 1-249-409-11 | CARBON | 220 | 5% | 1/4W | |
| R440 | 1-247-804-11 | CARBON | 75 | 5% | 1/4W | |
| R441 | 1-249-405-11 | CARBON | 100 | 5% | 1/4W | |
| R442 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W | |
| R443 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W | |
| R480 | 1-247-881-00 | CARBON | 120K | 5% | 1/4W | |
| R499 | 1-249-421-11 | CARBON | 2.2K | 5% | 1/4W | |
| R507 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W | |
| R508 | 1-249-423-11 | CARBON | 3.3K | 5% | 1/4W | |
| R509 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W | |
| R510 | 1-249-423-11 | CARBON | 3.3K | 5% | 1/4W | |
| R512 | 1-249-433-11 | CARBON | 22K | 5% | 1/4W | |
| R513 | 1-249-435-11 | CARBON | 33K | 5% | 1/4W | |
| R514 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W | |
| R515 | 1-247-903-00 | CARBON | 1M | 5% | 1/4W | |
| R516 | 1-247-903-00 | CARBON | 1M | 5% | 1/4W | |
| R517 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W | |
| R518 | 1-249-428-11 | CARBON | 8.2K | 5% | 1/4W | |
| R519 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W | |
| R520 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W | |
| R521 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W | |
| R522 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W | |
| R524 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W | |
| R525 | 1-247-903-00 | CARBON | 1M | 5% | 1/4W | |
| R527 ⚠ | 1-212-857-00 | FUSIBLE | 10 | 5% | 1/4W | F |
| R528 ⚠ | 1-212-857-00 | FUSIBLE | 10 | 5% | 1/4W | F |

| Ref.No. | Part No. | Description | | | |
|---|---|---|---|---|---|
| R529 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W |
| R530 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R531 | 1-249-419-11 | CARBON | 1.5K | 5% | 1/4W |
| R532 | 1-247-883-00 | CARBON | 150K | 5% | 1/4W |
| R533 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W |
| R534 | 1-249-413-11 | CARBON | 470 | 5% | 1/4W |
| R535 | 1-249-424-11 | CARBON | 3.9K | 5% | 1/4W |
| R536 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W |
| R537 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R538 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R540 | 1-216-349-00 | CARBON | 1 | 5% | 1/2W |
| R550 | 1-249-504-11 | CARBON | 10 | 5% | 1/4W |
| R702 | 1-249-433-11 | CARBON | 22K | 5% | 1/4W |
| R703 | 1-249-433-11 | CARBON | 22K | 5% | 1/4W |
| R704 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W |
| R705 | 1-249-418-11 | CARBON | 1.2K | 5% | 1/4W |
| R706 | 1-249-420-11 | CARBON | 1.8K | 5% | 1/4W |
| R707 | 1-249-423-11 | CARBON | 3.3K | 5% | 1/4W |
| R708 | 1-249-428-11 | CARBON | 8.2K | 5% | 1/4W |
| R709 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W |
| R710 | 1-249-418-11 | CARBON | 1.2K | 5% | 1/4W |
| R711 | 1-249-420-11 | CARBON | 1.8K | 5% | 1/4W |
| R712 | 1-249-423-11 | CARBON | 3.3K | 5% | 1/4W |
| R713 | 1-249-428-11 | CARBON | 8.2K | 5% | 1/4W |
| R714 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W |
| R715 | 1-249-418-11 | CARBON | 1.2K | 5% | 1/4W |
| R716 | 1-249-420-11 | CARBON | 1.8K | 5% | 1/4W |
| R717 | 1-249-423-11 | CARBON | 3.3K | 5% | 1/4W |
| R718 | 1-249-428-11 | CARBON | 8.2K | 5% | 1/4W |
| R719 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W |
| R720 | 1-249-418-11 | CARBON | 1.2K | 5% | 1/4W |
| R721 | 1-249-420-11 | CARBON | 1.8K | 5% | 1/4W |
| R722 | 1-249-423-11 | CARBON | 3.3K | 5% | 1/4W |
| R723 | 1-249-428-11 | CARBON | 8.2K | 5% | 1/4W |
| R724 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W |
| R725 | 1-249-418-11 | CARBON | 1.2K | 5% | 1/4W |
| R726 | 1-249-420-11 | CARBON | 1.8K | 5% | 1/4W |
| R727 | 1-249-423-11 | CARBON | 3.3K | 5% | 1/4W |
| R728 | 1-249-428-11 | CARBON | 8.2K | 5% | 1/4W |
| R729 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W |
| R730 | 1-249-418-11 | CARBON | 1.2K | 5% | 1/4W |
| R731 | 1-249-420-11 | CARBON | 1.8K | 5% | 1/4W |
| R732 | 1-249-423-11 | CARBON | 3.3K | 5% | 1/4W |
| R733 | 1-249-428-11 | CARBON | 8.2K | 5% | 1/4W |
| R734 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W |
| R735 | 1-249-418-11 | CARBON | 1.2K | 5% | 1/4W |
| R736 | 1-249-420-11 | CARBON | 1.8K | 5% | 1/4W |
| R737 | 1-249-423-11 | CARBON | 3.3K | 5% | 1/4W |
| R738 | 1-249-428-11 | CARBON | 8.2K | 5% | 1/4W |
| R739 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W |
| R740 | 1-249-418-11 | CARBON | 1.2K | 5% | 1/4W |
| R741 | 1-249-420-11 | CARBON | 1.8K | 5% | 1/4W |
| R742 | 1-249-423-11 | CARBON | 3.3K | 5% | 1/4W |
| R743 | 1-249-428-11 | CARBON | 8.2K | 5% | 1/4W |
| R744 | 1-249-433-11 | CARBON | 22K | 5% | 1/4W |
| R745 | 1-249-433-11 | CARBON | 22K | 5% | 1/4W |
| R746 | 1-249-433-11 | CARBON | 22K | 5% | 1/4W |

**Note:**
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Replace only with part number specified.

**Note:**
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

| Ref.No. | Part No. | Description | | | | |
|---|---|---|---|---|---|---|
| R747 | 1-249-433-11 | CARBON | 22K | 5% | 1/4W | |
| R748 | 1-249-433-11 | CARBON | 22K | 5% | 1/4W | |
| R749 | 1-249-433-11 | CARBON | 22K | 5% | 1/4W | |
| R750 | 1-249-433-11 | CARBON | 22K | 5% | 1/4W | |
| R751 | 1-249-433-11 | CARBON | 22K | 5% | 1/4W | |
| R755 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W | |
| R756 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W | |
| R761 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W | |
| R762 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W | |
| R763 | 1-249-433-11 | CARBON | 22K | 5% | 1/4W | |
| R764 | 1-249-433-11 | CARBON | 22K | 5% | 1/4W | |
| R771 | 1-247-764-11 | CARBON | 10K | 5% | 1/2W | |
| R906 | 1-247-704-11 | CARBON | 220 | 5% | 1/4W | |
| R907 | 1-247-713-11 | CARBON | 1K | 5% | 1/4W | |
| R908 | 1-247-717-11 | CARBON | 2.2K | 5% | 1/4W | |
| R909 | 1-249-466-11 | CARBON | 56K | 5% | 1/4W | |
| R910 | 1-247-713-11 | CARBON | 1K | 5% | 1/4W | |
| R911 | 1-247-713-11 | CARBON | 1K | 5% | 1/4W | |
| R912 | 1-247-717-11 | CARBON | 2.2K | 5% | 1/4W | |
| R913 | 1-247-704-11 | CARBON | 220 | 5% | 1/4W | |
| R914 | 1-247-713-11 | CARBON | 1K | 5% | 1/4W | |
| R915 | 1-247-717-11 | CARBON | 2.2K | 5% | 1/4W | |
| R916 | 1-247-717-11 | CARBON | 2.2K | 5% | 1/4W | |
| R927 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W | |
| R928 ⚠ | 1-212-865-00 | FUSIBLE | 22 | 5% | 1/4W | F |
| R931 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W | |
| R932 ⚠ | 1-215-889-00 | METAL OXIDE | 330 | 5% | 2W | F |
| R933 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W | |
| R934 | 1-249-433-11 | CARBON | 22K | 5% | 1/4W | |
| R935 | 1-249-433-11 | CARBON | 22K | 5% | 1/4W | |
| R936 ⚠ | 1-212-849-00 | FUSIBLE | 4.7 | 5% | 1/4W | F |
| R937 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W | |
| R951 | 1-216-057-00 | METAL GLAZE | 2.2K | 5% | 1/10W | |
| R952 | 1-216-057-00 | METAL GLAZE | 2.2K | 5% | 1/10W | |
| R953 | 1-216-057-00 | METAL GLAZE | 2.2K | 5% | 1/10W | |
| R954 | 1-216-057-00 | METAL GLAZE | 2.2K | 5% | 1/10W | |
| R955 | 1-216-089-00 | METAL GLAZE | 47K | 5% | 1/10W | |
| R956 | 1-216-083-00 | METAL GLAZE | 27K | 5% | 1/10W | |
| R957 | 1-216-063-00 | METAL GLAZE | 3.9K | 5% | 1/10W | |
| R958 | 1-216-085-00 | METAL GLAZE | 33K | 5% | 1/10W | |
| R959 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R960 | 1-216-079-00 | METAL GLAZE | 18K | 5% | 1/10W | |
| R961 | 1-216-079-00 | METAL GLAZE | 18K | 5% | 1/10W | |
| R962 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R963 | 1-216-085-00 | METAL GLAZE | 33K | 5% | 1/10W | |
| R964 | 1-216-083-00 | METAL GLAZE | 27K | 5% | 1/10W | |
| R965 | 1-216-063-00 | METAL GLAZE | 3.9K | 5% | 1/10W | |
| R966 | 1-216-089-00 | METAL GLAZE | 47K | 5% | 1/10W | |
| R967 | 1-216-089-00 | METAL GLAZE | 47K | 5% | 1/10W | |
| R968 | 1-216-089-00 | METAL GLAZE | 47K | 5% | 1/10W | |
| R969 | 1-216-085-00 | METAL GLAZE | 33K | 5% | 1/10W | |
| R970 | 1-216-085-00 | METAL GLAZE | 33K | 5% | 1/10W | |
| R971 | 1-216-095-00 | METAL GLAZE | 82K | 5% | 1/10W | |
| R972 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R973 | 1-216-071-00 | METAL GLAZE | 8.2K | 5% | 1/10W | |
| R974 | 1-216-071-00 | METAL GLAZE | 8.2K | 5% | 1/10W | |

| Ref.No. | Part No. | Description |
|---|---|---|
| RV151 | 1-238-885-11 | RES, VAR 20K/20K (REC LEVEL) |
| RV161 | 1-238-359-11 | RES, VAR, CARBON 20K/20K (LEVEL) |
| RV301 | 1-238-017-11 | RES, ADJ, CARBON 22K |
| RV302 | 1-238-017-11 | RES, ADJ, CARBON 22K |
| RV303 | 1-238-015-11 | RES, ADJ, CARBON 4.7K |
| RV304 | 1-238-015-11 | RES, ADJ, CARBON 4.7K |
| RV305 | 1-238-017-11 | RES, ADJ, CARBON 22K |
| RV951 | 1-238-237-11 | RES, ADJ, CERMET 470 |
| RV952 | 1-238-237-11 | RES, ADJ, CERMET 470 |
| RY501 | 1-515-726-11 | RELAY |
| S11 | 1-570-975-11 | SWITCH, SLIDE (CASSETTE TABLE IN) |
| S12 | 1-572-247-11 | SWITCH, SLIDE (CASSETTE TABLE OUT) |
| S701 | 1-571-305-11 | SWITCH, PUSH (1 KEY)(POWER) |
| S702 | 1-571-520-11 | SWITCH, SLIDE (TIMER) |
| S703 | 1-570-974-11 | SWITCH, SLIDE (REC MODE) |
| S704 | 1-572-230-11 | SWITCH, ROTARY (INPUT) |
| S705 | 1-554-596-21 | SWITCH, KEY BOARD (SKIP ID/WRITE) |
| S706 | 1-554-596-21 | SWITCH, KEY BOARD (SKIP ID/ERASE) |
| S707 | 1-554-596-21 | SWITCH, KEY BOARD (7) |
| S708 | 1-554-596-21 | SWITCH, KEY BOARD (8) |
| S709 | 1-554-596-21 | SWITCH, KEY BOARD (9) |
| S710 | 1-554-596-21 | SWITCH, KEY BOARD (START ID/WRITE) |
| S711 | 1-554-596-21 | SWITCH, KEY BOARD (START ID/ERASE) |
| S712 | 1-554-596-21 | SWITCH, KEY BOARD (4) |
| S713 | 1-554-596-21 | SWITCH, KEY BOARD (5) |
| S714 | 1-554-596-21 | SWITCH, KEY BOARD (6) |
| S715 | 1-554-596-21 | SWITCH, KEY BOARD (START ID/AUDIO) |
| S716 | 1-554-596-21 | SWITCH, KEY BOARD (START ID/RENUMBER) |
| S717 | 1-554-596-21 | SWITCH, KEY BOARD (1) |
| S718 | 1-554-596-21 | SWITCH, KEY BOARD (2) |
| S719 | 1-554-596-21 | SWITCH, KEY BOARD (3) |
| S720 | 1-554-596-21 | SWITCH, KEY BOARD (REPEAT) |
| S721 | 1-554-596-21 | SWITCH, KEY BOARD (SKIP PLAY) |
| S722 | 1-554-596-21 | SWITCH, KEY BOARD (MARGIN RESET) |
| S723 | 1-554-596-21 | SWITCH, KEY BOARD (FADER) |
| S724 | 1-554-596-21 | SWITCH, KEY BOARD (MODE/RESET) |
| S725 | 1-554-596-21 | SWITCH, KEY BOARD (MODE/COUNTER) |
| S726 | 1-554-596-21 | SWITCH, KEY BOARD ( ◀◀ ) |
| S727 | 1-554-596-21 | SWITCH, KEY BOARD ( ▶▶ ) |
| S728 | 1-554-937-11 | SWITCH, KEY BOARD ( ●REC ) |
| S729 | 1-554-937-11 | SWITCH, KEY BOARD ( ▮▮ PAUSE) |
| S730 | 1-554-937-11 | SWITCH, KEY BOARD (○REC MUTE) |
| S731 | 1-554-937-11 | SWITCH, KEY BOARD (▲OPEN/CLOSE) |
| S732 | 1-554-937-11 | SWITCH, KEY BOARD ( ■ ) |
| S733 | 1-554-937-11 | SWITCH, KEY BOARD ( ▶ ) |
| S734 | 1-554-596-21 | SWITCH, KEY BOARD ( ⏮ ) |
| S735 | 1-554-596-21 | SWITCH, KEY BOARD ( ⏭ ) |
| S736 | 1-554-596-21 | SWITCH, KEY BOARD (END ID/WRITE) |
| S737 | 1-554-596-21 | SWITCH, KEY BOARD (END ID/ERASE) |
| S738 | 1-554-596-21 | SWITCH, KEY BOARD (CLEAR) |
| S739 | 1-554-596-21 | SWITCH, KEY BOARD (0) |
| S740 | 1-554-596-21 | SWITCH, KEY BOARD (MUSIC SCAN) |
| S901 | 1-571-878-11 | SWITCH, PUSH (2 KEY) (CASSETTE IN/REC PROOF) |
| S902 | 1-570-771-21 | SWITCH (LIMIT) |
| T182 | 1-421-946-11 | (75ES/700)...TRANSFORMER, PULSE |

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| Ref.No. | Part No. | Description |
|---|---|---|
| T901 ⚠ | 1-450-080-11 | (75ES/700)...TRANSFORMER, POWER |
| T901 ⚠ | 1-450-164-11 | (55ES).....TRANSFORMER, POWER |
| X301 | 1-567-816-11 | VIBRATOR, CRYSTAL (18.816MHz) |
| X302 | 1-567-815-11 | VIBRATOR, CRYSTAL (22.5792MHz) |
| X303 | 1-578-667-11 | VIBRATOR, CRYSTAL (49.152MHz) |
| X701 | 1-577-359-21 | VIBRATOR, CERAMIC (4.19MHz) |
| ZD902 | 8-719-933-33 | DIODE HZS6A1L |
| ZD903 | 8-719-933-33 | DIODE HZS6A1L |

ACCESSORY & PACKING MATERIAL

| | |
|---|---|
| 1-465-312-11 | REMOTE COMMANDER (RM-D55) |
| 1-558-271-11 | (75ES)...CORD, CONNECTION |
| 1-559-533-11 | (700)....CORD, CONNECTION |
| *3-701-613-00 | (55ES:AEP/75ES)...BAG, POLYETHYLENE |
| 3-703-450-01 | (75ES:US/700)...INSTRUCTION |
| 3-704-366-01 | (55ES:AEP/75ES)...SCREW (CASE) (M3X8) |
| 3-751-364-11 | (55ES).....MANUAL, INSTRUCTION |
| 3-751-364-21 | (700).....MANUAL, INSTRUCTION |
| 3-751-364-41 | (55ES:AEP).....MANUAL, INSTRUCTION |
| 3-751-688-21 | (75ES).....MANUAL, INSTRUCTION |
| 3-751-688-31 | (75ES:Canadian)...MANUAL, INSTRUCTION |
| 3-707-584-01 | COVER, BATTERY (for RM-D55) |
| *4-936-610-01 | (55ES)...INDIVIDUAL CARTON |
| *4-936-611-01 | (700)....INDIVIDUAL CARTON |
| *4-936-623-01 | (75ES)...INDIVIDUAL CARTON |
| *4-931-451-01 | (700).....CUSHION |
| *4-936-624-01 | (55ES/75ES)...CUSHION |

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Ne les remplacer que par une pièce portant le numéro spécifié.